6

TRANSPORTATION

6 TRANSPORTATION

This chapter establishes policies and standards to provide a multimodal transportation system that encourages alternatives to automobile travel. This is achieved primarily by adopting land use policies that would reduce the need for automobile travel. Primary among these is to establish services and jobs closer to residences and thereby to foster pedestrian friendly environments. Similarly, denser settlement patterns are proposed, to promote transit, as well as pedestrian activities. Finally, road network improvements are proposed that would optimize the use of existing facilities, providing a multimodal transportation system that encourages transit and meets the needs of pedestrian and bicyclists, as well as automobiles. The prevalent sentiment against wide arterial streets and the desire to conserve the character of established neighborhoods are reflected in the policies, fostering the characteristics of traditional Santa Fe neighborhoods. This chapter is closely coordinated with Growth Management (Chapter 4) and Land Use (Chapter 3), providing long term land use solutions to transportation issues.

Plan policies have been designed to ensure that:

- Alternatives to automobile trips are encouraged by promoting a compact urban form, providing neighborhood amenities closer to where residents live, fostering pedestrian-friendly environments, and encouraging transit service to serve commercial centers;
- Trip-lengths are kept to a minimum by promoting a mix of land uses in different parts of the city, locating residences closer to job centers, and delineating development along transit-served corridors;
- The intensity and location of development that makes transit feasible is maintained, transit-intensive corridors are established where higher transit service levels will be provided; and a minimum residential density in new neighborhoods is established; and
- A street network that promotes flexibility of routes and connections between and within neighborhoods is promoted.

The chapter addresses transportation issues from a citywide to a neighborhood- and block-level scale. The relationship between the local and the regional system and agencies is also addressed. The chapter contains policies to ensure that existing uses and neighborhoods are not unduly impacted as the city grows.

The following themes and guiding policies apply to this chapter:

THEMES

- Quality of Life - Enhance the quality of life of the community and ensure provision of community services for residents.
- Transportation Alternatives - Reduce automobile dependence and dominance.
- Economic Diversity - Develop and implement a comprehensive strategy to increase job opportunities, diversify the economy, and promote arts and small businesses.
- Regional Perspective - Maintain a regional growth management perspective.

- Character - Maintain and respect Santa Fe's unique personality, sense of place, and character
- Urban Form - Promote a compact urban form and encourage sensitive/compatible infill development.
- Community-Oriented Downtown - Put community activities back into Downtown.
- Community-Oriented Development - Orient new development to the community; foster public life, vitality, and community spirit.
- Mixed Use - Provide a mix of land uses in all areas of the city

GUIDING POLICIES

6-1 STREETS

6-1-G-1 Implement a comprehensive strategy to decrease reliance on the automobile.

Reduction in automobile dependence and dominance is a guiding theme of this document. A comprehensive strategy to reduce automobile traffic and dependence is outlined.

6-1-G-2 Give people priority over cars.

The Plan emphasizes dedicated bike and pedestrian access and shared use of roadways. Along some routes, buses should have their own lanes, at least during the peak hours.

6-1-G-3 Provide for a closely spaced network of narrower streets as opposed to fewer wider streets.

The Plan also attempts to provide greater street connectivity in some existing urban areas to provide local linkages and lessen dependence on wide streets.

6-1-G-4 Ensure that streets do not become barriers to people crossing.

Crossing shall be provided for on the Relief Route, Cerrillos Road, St. Michael's Drive, St. Francis Drive, and other wide streets. Planted medians reduce the apparent width of streets, and enable safer pedestrian crossings.

6-1-G-5 Ensure that new development is more "connected" to its surroundings with an increased number of access points and pedestrian and bicycle connections to a neighborhood network.

6-1-G-6 Provide fair and equitable means for paying for future street improvements.

6-2 TRANSIT AND TRANSPORTATION

6-2-G-1 Promote local and regional public transit serving Santa Fe.

6-2-G-2 Adopt a policy of "transit first," and give transit priority over street widenings.

6-2-G-3 Develop a Transportation Demand Management program in cooperation with the local business community.

6-3 BICYCLE CIRCULATION

For detailed policies related to bikeways, see Bikeways Master Plan (1993).

6-3-G-1 Provide a comprehensive network of bikeways for safe and efficient transportation.

6-3-G-2 Recognize bicycling and walking as viable alternatives to motorized transportation.

6-3-G-3 Provide off-road trails as an alternative to on-road travel where natural corridors exist.

6-3-G-4 Provide necessary amenities, such as secure bike racks and traffic signals which can be triggered by bicyclists.

6-4 PARKING

6-4-G-1 Provide adequate public parking within the context of a balanced and integrated transportation system which includes transit, bicycling, and pedestrian alternatives.

6-4-G-2 Enhance Downtown accessibility for residents by providing transit and other transportation options in addition to parking opportunities.

6-4-G-3 Develop a comprehensive park and ride program to serve residents of outlying areas.

6-5 AVIATION

6-5-G-1 Support continued use of the municipal airport for aviation, but not to upgrade to handle larger commercial aircraft.

This will allow for the natural increase in commercial passenger traffic under current airport conditions but will indicate that the airport does not intend to upgrade to an airport handling larger commercial aircraft or airlines (or a Part 139 Airport in technical parlance).

6-5-G-2 Minimize conflicts between airport operations and urban uses.

6-5-G-3 Ensure adequate intermodal surface access and connections to the airport.

6.1 STREETS

6.1.1 RECENT TRANSPORTATION PLANNING EFFORTS

A number of transportation planning efforts have been undertaken recently that relate directly to the General Plan. Among these efforts are the following:

Long-range Transportation Plan

Prepared by the Santa Fe Metropolitan Planning Organization, the plan identifies transportation needs through the year 2015 and projects to meet these needs. It is intended to

satisfy federal transportation planning requirements prescribed by the Intermodal Surface Transportation Efficiency Act of 1991.

The *Long-range Transportation Plan* is intended also to respond to community interest in finding modes of travel other than the single-occupancy vehicle (i.e., public transportation, carpooling/vanpooling, and nonmotorized transportation). The plan is to serve as a guide for the use of transportation funds in the Santa Fe Metropolitan Area that are available to reduce traffic congestion and improve traffic safety. Projects identified in the *Transportation Plan*, and some priorities, are taken from this and other adopted plans. With new land uses established in this Plan, priorities and projects may not remain the same. The *Transportation Plan* was adopted in November 1994 and will be updated following completion of the General Plan.

Urban Area Arterial Roads Task Force Recommendations

The Extraterritorial Zone has a transportation plan separate from the city, known as the *Santa Fe Extraterritorial Arterial Roads Plan*. The road plan was adopted with the *Santa Fe Comprehensive Extraterritorial Plan* in 1992 by the City Council and the County Commission. The Urban Area Arterial Roads Task Force, a citizens advisory group, was appointed in 1993 to help determine road location and alignment recommendations for the Extraterritorial Zone plan that is being updated, as well as for streets in the city. In fall 1995, the Urban Area Arterial Roads Task Force recommended acceptable future road corridors; some of these recommendations have been incorporated in the General Plan.

Regional Park and Ride Study

Santa Fe Trails Transit is the lead agency in conducting a regional park and ride study that encompasses the City of Santa Fe, Santa Fe County, Rio Rancho, and Los Alamos. The purpose of the study is to find ways to increase the use of high-occupancy vehicles, such as vanpools and express bus service operating from park and ride lots, to serve commuters traveling to the destinations listed above. The final report of the regional park and ride study was completed in November 1995. The report documents the analyses, findings, and recommendations related to data collection; multimodal planning analysis; and the service, administrative, and marketing plans. In the Santa Fe Planning Area, six locations are identified as potential park and ride sites:

- Santa Fe Factory Stores,
- Villa Linda Mall,
- Sam’s Club,
- De Vargas Center/Guadalupe Street,
- Camino La Tierra at U.S. Highway 285, and
- Santa Fe Opera.

6.1.2 STREET NETWORK

Santa Fe's street network is primarily made up of two-lane streets. The Downtown and the surrounding older neighborhoods are characterized by narrow streets with limited traffic capacity.

Many streets, especially in the newer parts of the city, are discontinuous, often ending at the edge of a subdivision or an arroyo. Neighborhoods built in the last 30 years, which occupy almost all urbanized sites south of St. Michael's Drive, are typified by fewer through streets and intersections, wider local streets, and a greater proportion of cul-de-sacs. The lack of a continuous street system and growth to the south and southwest has resulted in congestion along the few north-south streets that are continuous, such as Cerrillos Road, St. Francis Drive, and Old Pecos Trail.

Neighborhood Street Pattern

An assessment of the street network at the neighborhood scale was conducted as part of an evaluation of the urban characteristics of neighborhoods representing different periods of Santa Fe's history (see Section 5.2 of the *Working Paper: Existing Conditions and Planning Issues – Urban Area and Extraterritorial Zone*, June 1995).

Some Santa Fe neighborhoods have much higher neighborhood accessibility, with neighborhoods such as Don Gaspar having 2.5 times as many access points as contemporary neighborhoods such as Bellamah. Through streets, however, are few in most Santa Fe neighborhoods, new or old; residents at many meetings complained about having to get into a car and drive in a circuitous route to get to a facility like a school, located barely a few hundred feet from their homes. In a neighborhood like Don Gaspar (with three through streets in a typical 100 acres) it is possible to get through the neighborhood on most streets with some turns and jogs, while in a typical 1960s neighborhood such as Casa Solana, there are no through streets.

While the overall street length in neighborhoods is similar, the overall area devoted to streets is much higher in contemporary neighborhoods, because the streets are wider. Also, the layout of the streets results in about twice as many intersections in traditional neighborhoods (about 22 per 100 acres in Don Gaspar, counting T-intersections as 0.5, more than twice as many as in Bellamah and East Palace) and much shorter blocks, fostering exploration and walking. The General Plan calls for neighborhood layout standards that will encourage walking, facilitate movement choice, and allow for alternatives to get in and out of neighborhoods.

6.1.3 TRAFFIC FLOW AND CONGESTION

Traffic flow and congestion have become increasing concerns for residents. With the State Capitol in Santa Fe, state office workers create much of the traffic congestion during the peak hours of the day. Furthermore, a number of commuters who work in Santa Fe live outside the city. Also, the ambiance of Santa Fe brings many visitors and has attracted many new residents, in turn causing more traffic.

The increase in traffic and congestion along the city's major thoroughfares sometimes results in calls to limit residential growth in the city. However, the increase in congestion on city streets has happened despite the limited growth that the city has experienced over the last two decades. For example, over the last 14 years (between 1980 and 1994), the city's population increased by only about 27 percent, while traffic along Cerrillos Road and St. Francis Drive has doubled and tripled. This has been largely the result of an increase in population in the immediate vicinity of the city (Extraterritorial Zone) of 142 percent (or more than five times the rate of population growth in the city) in the same period.

Downtown and Visitor Traffic

Downtown, home to about 6,400 jobs, has a mix of office and commercial land use and is congested through most of the day. The summer months of June, July, and August account for 38.9 percent of the visitor trips to Santa Fe. August is the peak month, with 15.8 percent of the yearly visitors. January is the lowest month for visitation, with only 1.1 percent of the visitor trips made in the month. The average number of days visitors spend in Santa Fe is 3.9. The average travel party has 2.6 persons, and 93.3 percent travel without children. Most visitors lodged in Santa Fe overnight during their visits (88.1 percent), based on the *1993 Santa Fe Convention and Visitors Bureau Conversion Study*.

Signal Optimization

Studies to optimize traffic signal timing to improve corridor flow without adding infrastructure have been conducted for St. Francis Drive, St. Michael's Drive, Paseo de Peralta, and Cerrillos Road. St. Francis Drive and Cerrillos Road are two of the most heavily used arterials in Santa Fe. Cerrillos Road has seen a 1.5- to 3.9-percent increase and St. Francis Drive has seen a 1.1- to 7.5-percent increase per year in traffic volumes in each of the last four years.

Traffic Volumes and Congestion

The two highest-volume roadway segments in Santa Fe are St. Francis Drive from Alameda to San Mateo Road and Cerrillos Road from Second Street to Siler Road, with over 40,000 annual average weekday vehicles, according to 1992 traffic counts conducted by the Santa Fe Metropolitan Planning Organization. In the peak hour, the three highest volume-to-capacity ratios are encountered in the following corridors:

- St. Francis Drive from Paseo de Peralta to Zia Road,
- Cerrillos Road from Paseo de Peralta to Rodeo Road, and
- St. Michael's Drive from Cerrillos Road to St. Francis Drive.

Some of the other high volume-to-capacity ratio corridors are:

- St. Francis Drive from the northern city limits to Paseo de Peralta,
- Rodeo Road from west of Cerrillos Road to Zia Road,
- The ring of Paseo de Peralta around the Plaza,
- Agua Fria from St. Francis Drive to Siler Road,

- Zia Road from Rodeo Road to St. Francis Drive,
- Siler Road from Agua Fria to Cerrillos Road,
- St. Michael's Drive from St. Francis Drive to Old Pecos Trail,
- Siringo Road from Camino Carlos Rey to St. Francis Drive, and
- Old Pecos Trail from St. Michael's Drive to Paseo de Peralta.

Construction of the Relief Route is expected to ease congestion along Cerrillos Road and St. Francis Drive, potentially making high-occupancy vehicle lanes for buses, vans, and carpools feasible along these principal arterials.

6.1.4 SETTING AND TRAVEL CHARACTERISTICS

The city is part of a larger commuting area which extends out to the Urban Area, and for some workers even as far as Albuquerque. The vast majority of workers in Santa Fe County work and live within it—85 percent of the jobs in the county are filled by county residents, and 87 percent of county residents work within the county (see Table 6.1). Santa Fe County had a net in-commute (workers commuting into the county minus workers commuting out) of 993 in 1990.

TABLE 6.1
TRAVEL CHARACTERISTICS OF WORKERS AND RESIDENTS IN SANTA FE COUNTY

	Workplace of Santa Fe County Residents		**Residence of Santa Fe County Workers**	
County	Total Persons	Percent	Total Persons	Percent
Santa Fe	42,042	87	42,042	85
Los Alamos	3,088	6	177	<1
Bernalillo	1,634	3	1,961	4
Rio Arriba	914	2	2,382	5
Taos	a	a	99	<1
Torrence	144	0	a	N/A
Sandoval	a	a	855	2
San Miguel	138	0	1,242	3
All Others	363	1	358	<1
Total	48,323	100	49,316	100

[a] Numbers are included in "All Others" category.

Source: 1990 Census Transportation Planning Package.

Mode of Transportation

The automobile is the primary mode of transportation in Santa Fe, and its share of commute trips rose between 1980 and 1990 (see Table 6.2). Few commute trips in 1990 were made by alternative transportation modes. Despite increasing automobile use, Santa Fe still had the lowest share of drive-alone trips of any city in New Mexico in 1990. Also, the city's bus service has since become operational, and because of its popularity, it is likely that the share of automobile trips in the city has declined moderately since 1990.

TABLE 6.2
CITY RESIDENTS' MODE OF TRANSPORTATION TO WORK

Mode	1980[a]	1990[b]
Drive Alone	67.9%	73.8%
Carpool	19.5%	14.1%
Bicycle	c	1.0%
Walked	c	4.7%
Worked at Home	c	6.0%
Other Means [c]	12.6%	0.4%
Total Trips	100.0%	100.0

(a) U.S. Department of Commerce: Bureau of the Census. County and City Data Book 1983, 10th Ed.

(b) City of Santa Fe. Travel Statistics Regarding Work Place, July 1994.

(c) Bicycle, walked, and worked at home included in "Other Means."

6.1.5 STREET CLASSIFICATIONS AND STANDARDS

The system of state routes, major, and local roads is shown on the Land Use (Figure 3-2). The primary distinguishing feature between the different classifications is access control rather than the width of the streets. Definitions of the different classifications follow:

- **Freeways.** Freeways serve regional and intercity travel and should not become the optimum route for intracity trips. Access is controlled, grade crossings are separated, lanes moving in opposite directions are separated by medians. Typical free-flow speeds exceed 55 miles per hour.
- **Principal Arterials.** These serve major centers of activity and carry the highest traffic volumes. They carry the major portion of trips entering and leaving the Urban Area and should carry a high proportion of the total urban area travel on a minimum of mileage. The total mileage for the existing principal arterial street system is 43.9 miles in the city, and 48.0 miles in the Extraterritorial Zone.
- **Minor Arterials.** These interconnect with and augment the principal arterial system and provide service to smaller activity centers. Trips are of a short length on this system, and there is more emphasis on land access than with the principal arterial system. The total

existing mileage for the minor arterial street system is 48.3 miles in the City of Santa Fe, and 33.1 miles in the Extraterritorial Zone.

- **Collector Streets.** These provide both access to and circulation within residential, commercial, and industrial areas. They distribute trips from the arterial system to local destinations, and trips are generally shorter in length. The city's collector system could be augmented to correct some of the deficiencies in the arterial system. The total mileage for the collector street system in the City of Santa Fe is 31.6, and 34.6 in the Extraterritorial Zone.

In addition to the these designated streets, the city's street system includes an extensive network of local and rural streets, both paved and dirt.

6.1.6 STREET SCALE AND DESIGN

The scale of the streets in Santa Fe—ranging from relatively recent, wide arterial streets to narrow, intentionally dirt lanes—reflects the city's struggle to maintain historic ambiance or a semirural lifestyle while increasing mobility. Only a handful of streets in Santa Fe are wider than two lanes; these are listed in Table 6. 3. Many residents are opposed to the widening of arterial streets or to the creation of new streets wider than two lanes.

TABLE 6.3
EXISTING STREETS WITH MORE THAN TWO LANES

Location	Lanes per Direction
St. Francis Drive (U.S. Highway 285, U.S. Highway 84)	2-3
Cerrillos Road (U.S. Highway 285)	2-3
St. Michael's (State Route 466)	3
Paseo de Peralta	1-2
Zia Road	2
Airport Road	2
Rodeo Road	2

Although most streets in the city are two lane, their cross-sectional widths can vary dramatically. Wider streets built over the last three decades in Santa Fe have resulted from the city's development standards, governed by safety concerns and the need to provide adequate access to underground utilities.

Table 6.4 summarizes the General Plan street classification system and outlines broad standards relating to the number of lanes and street width; actual street-width standards will be established as part of the City Code.

Photographs

Photographs

TABLE 6.4
STREET CLASSIFICATIONS AND STANDARDS

Street Type	Function	Access	Additional Street Functions/Amenities (within right-of-way)[a,b]	Number of Lanes	Parking
Freeway	Provides for regional mobility	Restricted to principal arterials via interchanges	Landscaping of unpaved right-of-way	Varies	None
Principal Arterials	Collects and distributes traffic from freeways to minor arterials and collector streets	Optimum distance between intersections is approximately one quarter mile. Driveways to major traffic generators may be permitted within the quarter mile spacing; more severe access limits preferable	Bikeways and landscaped median; park strips (for four or more lanes only); sidewalk with planting strip separating it from the street; and transit facilities	2 or 4 lanes	None
Minor Arterials	Same as principal arterial	Same as principal arterial	Bikeways, sidewalks, and transit facilities	2 lanes	Two-sides, One-side, and None
Transit-intensive Corridor	Provides preferential right-of-way for buses and high-occupancy vehicle	No restriction on spacing of intersecting streets, but signals along the transit-intensive corridors should be limited and timed for preferential movement along transit-intensive corridors. Driveways should be no closer than 100 feet apart and prohibited where access from other streets is feasible	Sidewalks and transit facilities Bikeways not encouraged	2 or 4 lanes	None during peak hours
Collector Streets	Serves as connector between local and arterial streets and provides direct access to specific sites	At major intersections, driveways on collector streets should be no closer than 50 feet to the intersection. Nonresidential driveways and/or intersecting streets or collector streets should be no closer than 300 to 400 feet apart	Bikeways, sidewalks, and transit facilities	2 lanes	Two sides, One side, and None
Local	Provides access to specific sites	Access is not restricted	Landscaped park strips, sidewalks. All local streets are bicycle friendly	2 lanes	Two sides, One side, and None

TABLE 6.4
STREET CLASSIFICATIONS AND STANDARDS

Street Type	Function	Access	Additional Street Functions/Amenities (within right-of-way)[a,b]	Number of Lanes	Parking
Rural	Same as principal arterial	Same as principal arterial. Used in limited situations where purpose is to limit impact on natural resources and where housing densities served are very low	Bikeways		One side, None

Notes:
[a] Transit facilities include bus stop signage and furniture and possibly bus pull out lanes.
[b] Street lighting and street trees are required for all pubic and private street improvements in accordance with city standards. Street trees along rural streets may not be required where preservation of the natural environment is considered foremost.

6.1.7 MAJOR STREET IMPROVEMENTS

To balance land use and the traffic carrying capacity of streets, peak-period traffic conditions were evaluated by comparing projected traffic volumes to roadway and intersection capacities. Service levels at study intersections and roadways were determined using standard traffic analysis methodology for signalized intersections, two-way stop intersections, multiway stop intersections, and roadway segments.

Where severe traffic congestion was projected, an iterative process to reduce traffic by rearranging land uses and increasing traffic capacity through improvements (i.e., construction of new lanes) was undertaken. Major street improvements required to accommodate buildout of the General Plan are illustrated in dashed lines on the Street Network figure (Figure 6-1). The area surrounding the intersection of Cerrillos, Airport, and Rodeo Roads will be designated as a priority study area. New streets, connecting to existing and proposed through streets, will help alleviate the congestion at this site and provide additional transit corridors.

6.1.8 STANDARDS FOR TRAFFIC LEVEL OF SERVICE (LOS)

Traffic service levels for intersections and roadway segments are characterized by examining peak-period operations. The standard measures of traffic flow are LOS and volume-to-capacity (or demand-to-capacity). LOS are classified by a letter grade that describes the quality of flow, ranging from the best condition (LOS A) through extreme congestion associated with over-capacity conditions (LOS F) (see Table 6.5).

TABLE 6.5
TRAFFIC LEVEL OF SERVICE DEFINITIONS

Level of Service (LOS)	Traffic Flow Conditions	Maximum Volume to Capacity Ratio
A	Free flow: speed is controlled by drivers' desires, stipulated speed limits, or physical roadway conditions.	0.6
B	Stable flow: operating speeds beginning to be restricted; little or no restrictions on maneuverability from other vehicles.	0.7
C	Stable flow: speeds and maneuverability more closely restricted; occasional backups behind left-turning vehicles at intersections.	0.8
D	Approaching unstable flow: tolerable speeds can be maintained but temporary restrictions may cause extensive delays; little freedom to maneuver; comfort and convenience low; at intersection, some motorists, especially those making left turns, may have to wait through one or more signal changes.	0.9
E	Approaching capacity: unstable flow with stoppages of momentary duration; maneuverability severely limited.	1.0
F	Forced flow: stoppages for long periods; low operating speeds. Delays at intersections average 60 seconds or more.	>1.00

Source: Blayney Dyett

Traffic demand modeling assumes that travel demand is a **response** to the patterns of land use activity in a city and surrounding region. The modeling process for this chapter uses existing and forecast land use and demographics as model inputs. Through daily activity, the people who live, visit, shop, and work in and around Santa Fe generate the traffic that the model assigns to the circulation system. The land use intensity also contributes to the magnitude of generated traffic; however, mixed use environments with convenient pedestrian access generate proportionally fewer additional automobile trips than areas devoted exclusively to a single use. Demographic descriptors such as income, household size, and vehicles per household affect traffic generation at the residential or household end.

6.2 TRANSIT AND TRANSPORTATION

For more detailed information on transit operations in the Urban Area and the Extraterritorial Zone, see Section 6.6 in Working Paper: Existing Conditions and Planning Issues – Urban Area and Extraterritorial Zone, *June 1995.*

Transit and paratransit programs for the city are operated by the Transit and Aviation Services Division of the Public Works Department, which also operates the Santa Fe Municipal Airport.

6.2.1 MUNICIPAL BUS SYSTEM

Although municipal transit service in Santa Fe is barely four years old, its need and acceptance is demonstrated by strong ridership, which has exceeded expectations. The original projection of 1,000 passengers per day by December of 1993 was passed in April of

that year, and ridership now averages 2,500 passengers per weekday and 1,500 on Saturdays and holidays. This ridership growth has been achieved by both a major route expansion program in May 1996 and with service frequency increases. Structuring land uses and intensities to promote transit and outlining policies to promote programmatic measures that will lead to increased transit patronage are some of the principal aims of the General Plan.

Service of the Santa Fe Trails system began in 1993. Presently the fleet consists of 15 29-passenger buses, five 35-passenger buses, five 16-passenger buses, two 25-passenger buses, one 22-passenger bus, and three 8-passenger vans. All buses operate on clean-burning compressed natural gas and are lift-equipped. There are nine routes with weekday service from 6:30 a.m. to 10:30 p.m. and Saturday service from 8:00 a.m. to 8:00 p.m. Sheridan Street in downtown Santa Fe is the northern hub for the system, and the southside hub operates from the Villa Linda Mall Transfer Center.

The cash fares are a standard $0.50 for adults, with half-rates for students less than 18 years of age, seniors 60 years and older, and the disabled. There is no charge for transfers. Standard and reduced monthly passes are $10 and $5 respectively. Approximately 15 percent of fare revenues are derived from service outside the city limits. Figure 6-2 shows existing transit routes .

6.2.2 PARATRANSIT

The paratransit service that complements the fixed-route transit system is provided by the Santa Fe Ride program. The service area for the Santa Fe Ride program is defined as that of the fixed-route service area, except that Santa Fe Ride services the airport. The service is available to Americans with Disabilities Act—certified passengers who pay a $1.00 flat rate for their trips. Seniors and indigent passengers who reside more than three-quarters of a mile form a fixed-route bus stop may also use the service at a flat rate of $4.00 per trip. Residents have requested an extension of this service farther into the Extraterritorial Zone. Any paratransit service extension will depend on the results of the regional park and ride study recently initiated by the Transit and Aviation Services Division. This, and any other expansion of transit or paratransit, would require negotiations between the city and the county to modify their Joint Services Agreement to share the costs of extending service. The current agreement covers only a portion of transit service costs.

The Santa Fe Ride program is operated under contract to the City of Santa Fe by private sector firms such as taxi, van, and paratransit operators.

The other transit program operated by the Parking Division is the Rideshare program for car and van pooling matching services. There is a Senior Van program for residents 60 years of age and older operated by the Community Services Department which will probably be consolidated with the Transit and Aviation Services Division during the next fiscal year.

6.2.3 REGIONAL TRANSIT

Shuttles operate from the Albuquerque International Airport to the Santa Fe Downtown hotels approximately every two hours, ten times a day, seven days a week. Greyhound Trailways, located on St. Michael's Drive, schedules northbound and southbound departures and arrivals daily.

6.2.4 RAIL TRANSPORTATION

Amtrak provides scheduled passenger service twice daily to Lamy, 20 miles to the south of Santa Fe. Shuttle buses to Downtown are provided for each train. The Santa Fe Southern Railroad has freight service available three times a week to Santa Fe via a spur from Lamy; it also operates a passenger excursion service that runs on a more frequent basis. No intermodal facilities link the rail line to any other mode of travel within the Extraterritorial Zone; however, there is a plan to construct a bicycle/pedestrian path along the railroad right-of-way from downtown Santa Fe to the city limits.

This path may eventually be extended through the Extraterritorial Zone to Lamy. Santa Fe Southern has also expressed the desire to establish a commuter line from El Dorado to Santa Fe. This would provide quick multimodal access from the Extraterritorial Zone into Santa Fe. Establishing commuter rail service would alter the existing transportation patterns immediately around passenger stations, as well as modify the regional commuting patterns. During the public meetings related to the General Plan, many residents also expressed support for a rapid rail connection between Albuquerque and Santa Fe.

6.2.5 FINANCING FOR ALTERNATIVE PUBLIC TRANSPORTATION SYSTEM

Under the flexible funding provisions of Intermodal Surface Transportation Efficiency Act, several opportunities exist to transfer funds from one program to another within the same mode or to use funds for alternative modes of travel. Three new Intermodal Surface Transportation Efficiency Act funding programs – the National Highway System, Surface Transportation Program, and Congestion Mitigation and Air Quality Improvement Program—afford these flexible funding opportunities. The National Highway System program is in transition to the National Transportation System, which will include transit, air, and rail.

Both highway and transit projects within the same corridor as a fully access-controlled National Highway System highway can be funded under the National Highway System. National Highway System funds are also available for fringe and corridor parking, carpool and vanpool projects, and bicycle/pedestrian projects adjacent to noninterstate highways on the National Highway System. One hundred percent of National Highway System funds may be transferred to the Surface Transportation Program by the state.

Surface Transportation Program funding can be used for transit capital projects that are eligible under the Federal Transit Act. Like National Highway System funds, Surface Transportation Program funds are also available for fringe and corridor parking, carpool and vanpool projects, and bicycle/pedestrian projects.

Congestion Mitigation and Air Quality Improvement Program funds were established to improve air quality. States with nonattainment areas must use Congestion Mitigation and Air Quality Improvement Program funds for projects that will improve air quality. States without nonattainment areas may use Congestion Mitigation and Air Quality Improvement Program funds as Surface Transportation Program funds. However, Santa Fe is not eligible for Congestion Mitigation and Air Quality Improvement Program funds.

Under the Intermodal Surface Transportation Efficiency Act, all three major transit programs, Sections 3, 9, and 18, are still in place. Section 3 provides funding for transit capital projects, but the funds are earmarked and discretionary. Section 9 and 18 both provide funding to states for capital and operating projects.

Section 9 funds are designated for urban areas while Section 18 funds are apportioned to states for projects in areas that are not urbanized. Because of the uncertainty of federal funding, efforts are needed to ensure that adequate service levels can be maintained with local and state funding.

6.2.6 TRANSPORTATION SYSTEMS MANAGEMENT

The term *transportation systems management* refers to measures designed to reduce peak-period auto traffic by making more efficient use of existing transportation resources and emphasizing ridesharing and nonauto alternatives. *Transportation demand management* is one component of transportation systems management, which focuses on efforts to reduce peak-hour transportation demand. Transportation systems management includes public transit, flexible working hours, car- and van-pooling, and incentives to increase the use of these alternatives. Transportation systems management has become increasingly important in the effort to enhance mobility through efficient use of alternative modes of transportation and in meeting federal and state air quality standards.

A successful transportation systems management program is an essential and important element in the continuing effort to achieve acceptable levels of traffic service. The specific objectives of transportation systems management are to:

- Reduce peak-hour traffic congestion by reducing the number of single-occupant vehicle commute trips;
- Reduce or delay the need for street improvements by making more efficient use of existing facilities;
- Reduce future air pollution concentrations and strive to meet state and federal ambient air pollution standards by reducing the number of single-occupant vehicle commute trips; and
- Reduce consumption of energy for transportation uses, thereby contributing to the overall objective of a sustainable community.

Photographs

Reducing the number of single-occupant vehicle commute trips will result in an increase in the percentage of pedestrian, bicycle, and transit trips. Average trip length and overall vehicle-miles traveled will also be reduced.

General Plan policies are designed to reinforce the studies made in promoting transit in recent years. Sites for two new multimodal transit hubs, transit-intensive corridors where high-frequency transit service would be provided, future transit service areas, as well as promotion of regional transit have been outlined.

6.3 BICYCLE AND PEDESTRIAN CIRCULATION

6.3.1 BICYCLE ROUTES

Bicycle planning in Santa Fe began in 1974 , but it was not until the early 1980s that the Santa Fe Bicycle Club worked in cooperation with the city to produce Santa Fe's first bicycle-user route map. In 1986, the City Transportation Department received grant money from the Federal Highway Administration and formalized the bicycle planning efforts in the city. In 1987, a six-member ad hoc advisory committee was formed with representatives from the Sangre de Cristo Cycling Club, the Santa Fe public school system, and other interested citizens. This Bikeways Committee collected information about bicycling needs, expanded community awareness and education efforts about cycling, and laid the groundwork for development of a long-range bikeways plan. The newest addition to the bike system is the 2.1-mile, off-road Arroyo Chamiso Bike Trail. The city has a bicycle map from 1994 that includes city-designated bike routes, trails, and a guide to the safety of the recommended routes (best, caution, and extra caution).

Bikeways Master Plan

The *1993 Santa Fe Bikeways Master Plan* outlined a network of trails that link homes, offices, schools, parks, and businesses throughout the city. The Santa Fe Rail and River Trails were identified in the *Bikeways Master Plan* as clear priorities and are being developed simultaneously.

The rail trail is envisioned to connect to an extension of the existing Arroyo Chamiso Urban Trail to provide a safe and efficient trail corridor from the city limits on the south to Downtown, linking major public and private destinations.

The Santa Fe Southern Railway purchased the 18-mile Lamy spur from the Atchison, Topeka, and Santa Fe Railway in 1992. Santa Fe Southern made it possible for the city to acquire the right to use a portion of the railroad right-of-way for a bicycle trail. The city intends to pursue this opportunity to develop an urban trail within city limits. The project will be carried out with the assistance of federal transportation funds allocated by the New Mexico State Highway and Transportation Department, and a grant from the New Mexico Energy, Minerals, and Natural Resources Department. The current operation of the railroad as an excursion line and freight carrier does not exceed ten miles per hour, so it is compatible

with bicycle and pedestrian uses. The railroad corridor right-of-way is roughly 100 feet wide, which allows for ample separation between the railroad and the trail.[1]

Regional Connections

No bicycle routes have been designated outside the city limits, although Rabbit Road, which parallels Interstate 25 to the south, has been classified for bicycle suitability by the Bikeways Committee. The distance from the Extraterritorial Zone to the city, as well as topography and the climate, probably deters most people from using a bicycle for commuting.

Several recreational routes within the Extraterritorial Zone have been identified by the Bikeways Committee. These include:

- Bishops Lodge Road to the north;
- Hyde Park Road and Upper Canyon Road to the east;
- County Road 67, Las Vegas Highway, Richards Avenue, and Cerrillos Road to the south; and
- Camino La Tierra, Buckman Road, County Road 70, and Airport Road to the west.

In addition, the option to acquire the right to use Santa Fe Southern railroad right-of-way as a bicycle trail could extend the planned Santa Fe Rail Trail south from the city limits to Lamy, providing bicycle access through the Extraterritorial Zone for recreational and commuter purposes alike.

Bikeway Classification

The General Plan designates two types of bikeways—Class I: Bike Paths, and Class II: Bike Lanes—which are defined in Table 6.6. Although these facilities are specifically designated for bicycles, like all other vehicles, bicycles are authorized to use the entire street network.

TABLE 6.6
BIKEWAY CLASSIFICATIONS

	Function	Access Control	Right-of-way/Standards
Class I Bike Paths	Provide exclusive right-of-way for bicyclists, with cross flows by motorists minimized.	Where crossing or access from the bicycle path is required, the crossing should be grade-separated or occur at pedestrian crossings. Midblock crossings should assign right-of-way through signing or signalization.	Minimum of eight feet for a two-way facility. The minimum paved width for a one-way bike path is five feet. A minimum two-foot wide graded area shall be provided adjacent to the pavement, but a three-foot graded area is recommended. Where pedestrian activity is expected, a minimum of twelve feet for a two-way facility should be provided.

[1] According to the *Bikeways Master Plan*, the Santa Fe Rail Trail and the Santa Fe River Trail are bikeway priorities.

TABLE 6.6
BIKEWAY CLASSIFICATIONS

	Function	Access Control	Right-of-way/Standards
Class II Bike Lanes	Provide preferential use of the paved area of roadway for bicyclists by establishing specific lines of demarcation between areas reserved for bicycles and motorists.	Access is similar to that recommended for roadways. At intersections where there is a bike lane and an actuated signal, it is desirable to install bicycle-sensitive detectors. Push button detectors force the bicyclists to stop and actuate the push button. Because most accidents for bicyclists occur at intersections, clear bikeway design at intersections should be implemented through the use of signing and striping.	Class II bike lanes are one-way facilities. On roadways with parking, the bike lane is located between the parking area and the traffic lane with five-foot minimums for the bike lane. Where parking is permitted and not marked, minimum width is twelve feet. On roadways where parking is prohibited, a minimum of five feet is required, including a two-foot gutter.

Note: All local streets are intended to be "bicycle friendly."

6.3.2 PEDESTRIAN CIRCULATION

While only about five percent of the commute trips in the city were made on foot in 1990, the actual share of walking trips is probably much higher if trips made by noncommuters (such as tourists) are taken into account.

Many of Santa Fe's traditional centers (such as Downtown and Canyon Road) are hubs of pedestrian activity. These are characterized by portals, streets shaded by trees and buildings, continuous sidewalks, and buildings oriented to the streets. Also, the overall scale of development, smaller blocks, and interconnected streets facilitate pedestrian movement. Many of the malls and other recent large commercial developments do not foster an environment conducive to walking. Policies and standards relating to building and block scale, massing, and character are included in Chapter 5: City Character and Urban Development.

6.4 PARKING

The concentration of activities Downtown, including government, commerce, and tourism (especially during the summer months), generates a high level of parking demand. Downtown's parking shortage during peak periods, according to the 1995 Municipal Parking Program study, is currently estimated at about 1,300 spaces. Not only is parking in short supply, residents perceive the Downtown as being inaccessible because of the expense and lack of available parking. Parking problems, stemming from tourism and other activities, also exist in some of the arts and crafts districts.

Parking is an important element of the city's transportation system. The availability of convenient and adequate parking is essential for creating and maintaining viable commercial districts and residential neighborhoods. Parking availability, transit use, traffic, neighborhood

protection, and public safety are all inter-related. For example, while easier parking would improve Downtown accessibility, it would also encourage people to drive, thereby contributing to congestion. This section of the General Plan focuses on policies and strategies to reduce parking demand, as well as ensure that parking is adequate and that the Downtown is accessible to residents.

6.4.1 MUNICIPAL PARKING SYSTEM

The city's Parking Division is responsible for all municipal parking operations and functions, including parking at municipal facilities, on-street parking and loading, and enforcement. The Division is charged with providing an adequate supply of affordable parking in the city to ensure economic vitality, and mobility and quality of life for Santa Feans.

The Division operates a Parking Enterprise Fund, which is financially self-sufficient and is independent of the city's General Fund. The Fund combines all parking revenues and expenditures and provides funding dedicated to the delivery and improvement of municipal parking facilities and services. The municipal parking system represents a significant public investment and has grown significantly in size, utilization costs, and revenues over the past decade.

Off-street Parking Facilities

The existing municipal public off-street parking supply includes one parking garage and nine surface parking lots, totaling 1,480 spaces. Hourly, daily, and monthly parking is available at most locations. All off-street parking facilities meet the Americans with Disabilities Act standards and provide designated parking spaces for mobility impaired persons.

Seven privately-owned parking facilities also exist, which together provide about 900 parking spaces (see *Working Paper: Existing Conditions and Planning Issues*; Section 6.3: Parking Supply and Locations, for details). Some have monthly and reserved parking, as well as transient parking.

On-street Parking

The on-street parking operation includes 1,090 metered parking spaces, 36 handicapped parking spaces, and 53 loading zones. There are many competing demands for the use of on-street curb space. It is used by moving traffic, taxis and buses picking up and discharging passengers, commercial delivery vehicles, people running errands to stores and businesses, and by short-term and long-term parkers. It is the goal of the on-street parking operation to balance these competing demands while taking into consideration the safety and traffic capacity of the street.

Parking Enforcement

This part of the parking operation includes ticketing, processing and collecting all parking citations on a daily basis. The goal of the parking enforcement program is to provide sound parking enforcement that supports the city's parking regulations, promotes traffic and pedestrian safety, and permits the city to expand its parking capacity through better utilization of the existing parking supply. Parking enforcement protects access needed for

commerce and public convenience; it provides for a more efficient delivery of goods and services. It also enhances the quality of life in residential neighborhoods by reducing the incidence of illegal parking in residential permit parking areas.

6.4.2 MUNICIPAL PARKING PROGRAM STUDIES

1983 Parking Study. The demand for off-street parking exceeds the supply in the Downtown area. The problem was recognized in the early 1980s, and a 1983 parking study outlined a three-phase approach for a parking development program for the Downtown. The study recommended additional parking spaces to be added at three municipal parking facilities (Water Street, City Hall, and Sandoval). Only one phase of the parking development program was implemented – the 400 space Sandoval parking facility, which opened in July 1988. There was resistance from some adjacent owners and tenants for development of the proposed Water Street parking facility. The proposed City Hall parking facility was deferred until a final master plan could be agreed on for the City Hall site.

1995 Parking Study. In 1994 a municipal parking program study was initiated to develop a comprehensive parking management program for the city. The study found that major deficiencies exist in the high demand areas of the city, including a deficit of 1,103 spaces in the core area of the Business Capitol District, and 167 spaces along Canyon Road. In the next ten years, the core area deficit is expected to increase by about 300 to 500 spaces. Canyon Road's parking deficit is expected to increase by about 50 spaces.

The study, completed in June 1995, includes analysis of parking supply and demand, survey of parking user characteristics and residential parking, a parking development program, financial analysis, recommended parking standards for commercial and industrial zoning districts, parking management strategies, and an implementation program.

6.5 AVIATION

Santa Fe Municipal Airport became part of the Transit and Aviation Services Division in October 1994 as a result of a reorganization of the Santa Fe City Government. The airport lies outside the city limits, nine miles from Downtown. With over 100,000 take-offs and landings annually, Santa Fe Municipal Airport is classified by the Federal Aviation Administration as a nonhub commercial aviation airport. The main runway is 8,323 feet long and is equipped with an instrument landing system. The secondary runway is 6,304 feet long. The airport can accommodate medium-size aircraft such as DC-9s and Boeing 727s. The control tower is operated by the Federal Aviation Administration and is open from 7:00 a.m. until 9:00 p.m.; however, the airport can conduct take-off and landing operations 24 hours a day. The control tower is contracted out to a private operator, while remaining under Federal Aviation Administration administrative control during 1996.

Three on-site fixed base operators also provide service. International Aviation, Santa Fe Aviation, and Zia Aviation provide full-service aircraft maintenance, refueling, flight instruction, aircraft rental, and charter. United Express Airlines provides daily commercial flights between Santa Fe and Denver, Colorado, carrying over 14,000 passengers annually.

The idea of a regional airport, located between Española and Taos, has in the past been broached to allow larger commercial aircraft to access the region without unduly impacting the city. This, however, would be a major undertaking and would surely encounter major opposition. It would also take many years just to break ground.

IMPLEMENTING POLICIES

6-1 STREETS

Street Alignment and Design Standards

6-1-I-1 Locate arterial and collector streets within the general alignments.

Minor variation from the depicted alignments will not require a General Plan amendment. Minor variations include anything less than 100 feet.

6-1-I-2 Adopt the *Urban Design Guidelines Report* for street standards to provide flexibility in design, especially in residential neighborhoods.

These should be based upon the criteria as outlined in the Urban Design Guidelines *document and should be incorporated as part of detailed engineering standards and the city's Subdivision Regulations.*

6-1-I-3 Allow for variation in street cross-sections. Minimize street cross-section widths.

The Fire Department is concerned with access due to streets that do not provide for adequate width. Of particular concern are narrow streets combined with a lack of adequate off-street parking which combine to create roads that are not passable for fire trucks and ambulances. The Fire Department needs a minimum of 20 feet of clear driving surface to assure adequate access.

Where there is a need for man-holes and access to underground utilities or the need for a turn lane at an intersection, the entire stretch of a street should not be designed to accommodate these widths; rather the street should be designed to be wide at a few necessary places.

6-1-I-4 Develop all streets that are four lanes or wider as boulevards, with a landscaped median strip.

6-1-I-5 Continue using the CIP to implement needed improvements to the street system.

Because the CIP should be consistent with the General Plan, major street improvements should be undertaken only when they are a part of the General Plan. In instances where major improvements are necessary but are not a part of the General Plan, the General Plan should be amended to incorporate them.

6-1-I-6 Incorporate access control requirements in the City Code.

6-1-I-7 Encourage the use of local aggregate material for road construction, which would give streets a distinctive Santa Fe hue.

6-1-I-8 Ensure that new streets serving commercial and neighborhood centers are designed to accommodate transit and other alternative modes of transportation.

6-1-I-9 Develop traffic calming standards.

The Fire Department generally supports the concept of "traffic calming." However it is important to note that measures to calm traffic can have varying degrees of impact on emergency vehicle response time.

Street Connectivity

6-1-I-10 Provide for greater street connectivity in new developments with the following measures:

- Require at least one through street (i.e., streets that run through the entire stretch of a development without many jogs) every 1,000 feet of any development;
- Incorporate in the Subdivision Regulations requirements for at least two access points for every 10 acres of development;
- Encourage parking that is located behind buildings, rather than between buildings and streets, and street designs that incorporate adequate on-street parking;
- Limit the proportion of loop streets and cul-de-sacs, and require bicycle and pedestrian connections to be provided at the end of such streets; and
- Provide for future connections to the undeveloped edge and where connection to existing urban development is poor.

All of these requirements need to be incorporated in the city's Subdivision Regulations. In many instances, such as for maximum block sizes, the current standards in the Regulations will need to be amended.

Standards for maximum block sizes for commercial and residential development are established in City Character and Urban Development (Chapter 5).

6-1-I-11 Maintain street connectivity in existing developments. Discourage speeding and cut-through traffic through neighborhoods by installing appropriate traffic control and calming measures, such as bulbing sidewalks at intersections and narrower street widths, without limiting through streets.

6-1-I-12 As part of the current process of updating the *Long-range Transportation Plan*, provide for river crossings.

6-1-I-13 Review all public street projects to ensure that adequate crossings for wildlife are maintained wherever streets cross riparian corridors shown on the General Plan Future Land Use (Figure 3-2).

6-1-I-14 Establish a corridor to protect the character of the Old Santa Fe Trail.

6-1-I-15 Establish appropriate truck routes through and around the city road system.

For through trucks (i.e., trucks not destined for Santa Fe), the Santa Fe Relief Route will assist in keeping them off Cerrillos Road and St. Francis Drive. In Santa Fe, trucks over a certain size are currently banned on portions of Agua Fria, Armenta, Zia, and Canyon roads. Trucks need to have access to office and commercial centers for them to be viable centers. Truck routes can be identified and trucks can be banned from certain streets or certain hours of the day (the banning becomes an enforcement issue).

6-1-I-16 Create a Transportation Task Force(s) that would advise on multimodal transportation systems, such as public transit and transportation demand management options in the development of a regional transportation plan, and to assist in the further refinement of the city's road system through the community planning process.

6-1-I-17 Limit trucks in the Downtown area to specified time periods.

Traffic Circulation

6-1-I-18 Strive to establish a transportation system which improves circulation options including transit, bicycling, and walking.

6-1-I-19 Require any development project that negatively impacts any freeway, arterial, collector street, or intersection to mitigate impacts associated with the project.

6-1-I-20 Establish and implement design standards and cross-section specifications for Urban Area roadway networks.

6-1-I-21 Implement, multimodal transportation system improvements to enhance circulation.

6-1-I-22 Continue to collect and analyze traffic volume data on a regular basis and monitor current intersection and roadway segment LOS on a regular basis. Use this information to update and refine the city's travel forecasting model so that estimates of future conditions are more strongly based upon local travel behavior and trends.

6-1-I-23 Consider, on a case by case basis, how to shift travel demand away from the peak period, especially in those situations where peak traffic problems result from a few major generators (e.g., outlying employment locations).

6-1-I-24 Continue a comprehensive evaluation of the efficiency of the urban street traffic control system, with emphasis on traffic signal timing, phasing, and coordination to optimize traffic flow along arterial corridors. Use traffic control systems to balance arterial street utilization (e.g., timing and phasing for turn movements and peak-period and off-peak signal timing plans).

The city has made recent efforts to optimize signal timings along key arterial routes such as Cerrillos Road. The completion of the city's new transportation model should aid in this comprehensive effort.

6-2 TRANSIT AND TRANSPORTATION

6-2-I-1 Investigate the Railyard site and its surrounding area, the site at the southwestern corner of Zia Road and St. Francis Drive, De Vargas Mall, Villa Linda Mall, and alternate sites as transit hubs for rail, bus, and paratransit service.

However, until commuter rail service is implemented, Sheridan Street should be maintained as the city's transit hub.

6-2-I-2 Provide frequent transit service on designated transit-intensive corridors.

The city should attempt to provide service with headways at least half as short on these corridors as compared to bus service elsewhere. Currently the frequency of bus service is 30 minutes, so with headways half as short along the transit-intensive corridors, the average waiting time along the transit corridors would be 7.5 minutes.

6-2-I-3 Along transit-intensive corridors, do not permit development at low intensities that will unduly impact transit viability.

6-2-I-4 Study the feasibility of transit priority signalization timing, at least along the transit-intensive corridors.

6-2-I-5 As part of the Cerrillos Road redevelopment project, consider the feasibility of dedicated transit lanes and the desirability of fixed guideways (such as trolleys) or other high-speed transit systems.

6-2-I-6 As part of the Cerrillos Road redevelopment project, conduct a study in the area surrounding the intersection of Cerrillos, Airport, and Rodeo Roads to determine the appropriate land uses and locations for new streets.

6-2-I-7 Consider the feasibility of providing free transit service Downtown.

Many other cities, albeit of greater size than Santa Fe, have instituted such programs. Funds for the service could be made available by instituting a Downtown Transit District, with partial funding provided by employers and businesses. The transportation systems management ordinance (see policy below) could include provisions that would allow employers some flexibility if they contribute to the Transit District.

6-2-I-8 Institute "Free Transit" days which would provide opportunities to promote transit ridership.

The Free Transit days could be accompanied by "Drive-free Days" in the Downtown area, where nonemergency private automobiles would not be permitted.

6-2-I-9 Adopt a transportation demand management ordinance which creates specific requirements to reduce peak-period trip generation by ten percent or more from the vehicle trip generation currently observed at similar sites without a transportation demand management program.

A ten-percent reduction in peak-period trip generation has been attained in many other cities through active management of demand.

6-2-I-10 Implement measures, including committed funding, to monitor compliance with the transportation demand management ordinance, and ensure that major employers, including the city, implement transportation demand management programs to reduce peak-period trip generation.

Major employers would be organizations that employ 100 or more employees at all facilities in the greater Santa Fe area; these would include public agencies such as the city, the state, and the school district.

6-2-I-11 Work with other local and regional agencies for commuter railroads to El Dorado and Albuquerque.

Santa Fe Southern has also expressed the desire to implement a commuter line from El Dorado to Santa Fe. There is also broad public support for a commuter railroad to Albuquerque.

6-2-I-12 Upon completion of the regional park and ride study, designate and develop park and ride facilities at appropriate locations along transit routes.

6-2-I-13 To the extent feasible, develop all designated transit stop facilities as comfortable, safe, well lit waiting areas, appropriate for year-round weather conditions, and with permanently displayed bus routes.

6-3 BICYCLE AND PEDESTRIAN CIRCULATION

Bicycle Planning

6-3-I-1 Use the *Bikeways Master Plan* as the primary tool for detailed policy making and bicycle system planning.

The Bikeways Plan *was last updated in 1993 and includes a comprehensive set of policies for bicycle planning. It should be periodically updated.*

6-3-I-2 Consider the feasibility of providing a network of bikeways along acequias and riparian corridors as part of the planned trail network if development and impacts do not negatively affect the environment or wildlife.

6-3-I-3 Conduct a signage and striping program for the bikeway network shown on the *Bikeways Master Plan*.

6-3-I-4 Implement the city's *Bikeways Master Plan* by:

- Adding bike lanes whenever possible in conjunction with road reconstruction or restriping projects and subdivision development and related off-site improvements;
- Improving existing crossings, and providing for future crossings of arroyos, railroads, and roadways;
- Seeking funding sources to implement the *Bikeways Plan* in locations where more than restriping is required;
- Working with Santa Fe County and other agencies to implement a regional bikeway system; and

- Pursuing private funding.

6-3-I-5 Make bikeway improvements a funding priority by:

- Continuing to consider financing bikeway design and construction as part of the city's annual construction and improvement fund;
- Incorporating bikeway improvements as part of CIP; and
- Pursuing Intermodal Surface Transportation Efficiency Act and other funding for new bikeways to the extent possible under federal and state law.

6-3-I-6 Continue requiring provision of secure, covered bicycle parking at all existing and future medium and high-density residential, commercial, industrial, and office/institutional uses.

Secure parking means areas where bicycles can be secured to a nonmovable rack to prevent theft.

6-3-I-7 Provide incentives for new or expanding multitenant commercial and industrial projects and large employers to provide secure bicycle parking, lockers, and showers for employees, where feasible.

Incentives may include reduced fees or reduced parking requirements

6-3-I-8 Amend the Zoning Ordinance to be consistent with the Transportation Demand Management Ordinance, and establish a program to promote bicycle use by large employment centers with 100 employees or more, and by city employees.

6-3-I-9 Require pedestrian access and bikeway connections to the citywide system every 500 feet, where feasible, as part of subdivision review.

6-3-I-10 At high-volume bicycle/automobile intersections that have actuated signals, install bicycle detector loops and consider the feasibility of providing midblock, bicycle-activated signals, where appropriate.

6-3-I-11 Assist and sponsor special events such as a “Bike to Work Day” and the Tierra Torture Mountain Bike race, which increase public awareness of bike use.

6-3-I-12 Designate a staff transportation planner as the point-person for bicycle and pedestrian planning in the city.

6-3-I-13 Consider installation of bicycle racks or other stowage equipment on buses (or other transit vehicles).

6-3-I-14 Adopt standards and/or guidelines for design and construction of bikeways.

This would include, for example, ensuring that drop inlet grates are perpendicular to bicycle flow and not parallel to it.

Pedestrian Circulation

6-3-I-15 Implement a program to install handicapped ramps at all intersections as street improvements are being installed.

6-3-I-16 Provide for pedestrian-friendly zones in conjunction with the development, redevelopment, and design of mixed use neighborhood centers, Downtown, schools, parks, and other high use areas by:

- Constructing wide sidewalks where feasible to accommodate increased pedestrian use;
- Providing intersection "bulbing" to reduce walking distances across arterial streets, mixed use centers, and other high use areas;
- Providing pedestrian facilities at all signalized intersections;
- Providing landscaping along streets four lanes or wider that promotes safer pedestrian crossing; and
- Constructing adequately lighted and safe access through subdivision sites.

6-3-I-17 Ensure that city standards for pedestrian facility design conform to the Americans with Disabilities Act requirements.

6-3-I-18 Require new local streets to connect with existing local streets and arterials, and permit cul-de-sac streets in urban residential areas only where bicycle and pedestrian access between cul-de-sacs, adjacent streets, and/or open space areas is integrated with an areawide pedestrian/bicycle system.

6-3-I-19 Analyze the pedestrian master plan system throughout the city and develop pedestrian friendly crossings for major arterials, collectors, and boulevards.

6-4 PARKING

6-4-I-1 Ensure that the adopted Municipal Parking Program provides for a network of lots/structures within walking distance of Downtown, as opposed to concentrating all parking in one or two large structures that may negatively impact the scale and character of Downtown.

6-4-I-2 Work with the state, the school district, and other agencies for joint use of parking facilities in the Downtown area in the evening and on weekends.

Many state offices are adjacent to Downtown and other frequented commercial centers that are short on parking. While some of these spaces are informally used during nonoffice hours, availability of other parking lots would alleviate many of the problems with a minimum of additional construction.

6-4-I-3 Consider establishing parking fee schedules that give priority to parking for businesses, shopping, and other short duration activities over parking for longer-duration commute trips.

6-4-I-4 Encourage long-term parking at off-street parking facilities and encourage the use of alternative transportation.

6-4-I-5 Establish parking standards to support trip reduction goals by:

- Allowing parking reductions for projects that have agreed to implement trip reduction methods, such as paid parking, and for mixed use developments; and
- Requiring businesses with more than 25 employees to provide preferential parking for carpools and vanpools.

6-4-I-6 Amend the Zoning Ordinance to include minimum and maximum parking requirements based on proximity to transit-intensive corridors and stations, and development intensity.

These standards should be examined as transit service changes. Parking above a minimum amount should be allowed only if additional amenities for bicyclists, pedestrians, transit and/or landscaping are provided.

6-4-I-7 Encourage the downtown business community to sponsor ways in which city residents could be permitted to park on-street downtown free for a limited time during business hours, at least during the nonpeak tourism months.

6-4-I-8 Upon completion of the regional park and ride study, designate and develop park and ride facilities at sites outside Downtown to divert Downtown-bound travelers from automobiles to transit.

6-4-I-9 Determine the feasibility of incentives to reduce the amount of land devoted to surface parking lots through redevelopment, construction of structured parking facilities, increased building construction along street frontage, and reduction in parking requirements.

6-4-I-10 Analyze alternative parking management strategies, to include preferential parking zones for mixed-use neighborhoods, shared parking, and transit-related reductions in parking requirements.

6-5 AVIATION

6-5-I-1 Prepare a Santa Fe Municipal Airport Environs Plan and monitor aviation activity and aviation needs to determine if airport growth should continue to be limited and to determine appropriate restrictions to place on surrounding land uses.

6-5-I-2 Undertake a study to map noise contours based on aviation activity at the airport, and undertake measures to reduce conflicts between urban uses and airport operations.

A study covering noise exposure was included and is available in the Proposed Airport Master Plan of August 1993. This master plan was never adopted. Installation of an Federal Aviation Administration radar will help controllers route aircraft away from the most populated areas, thus reducing noise in those areas. Take-off and landing patterns are related to dominant environmental factors, such as prevailing winds, temperatures, etc. Aircraft safety is always a factor in take-off and landing patterns. A buffer area, restricted to industrial and commercial development, should be planned for

the area immediately surrounding the airport. This will reduce complaints from residents. Insulation to reduce indoor sound in buildings that fall within high-noise level contours should also be required.

6-5-I-3 Maintain effective surface transportation linkages to the Municipal Airport.

This would include transit service if warranted by commercial passenger traffic.

6-5-I-4 Annex the airport, Airport Road, and land surrounding the airport.

Businesses at and near the airport have to deal with multiple levels of government. In some areas they deal with the city, in other areas the city directs them to the state or the county. Annexing the airport would give the city more control over the airport and the surrounding area, add to the city's tax base, and make doing business with and on the airport easier for all involved.

6-5-I-5 Analyze with the regional planning authority if private airports should be allowed in the region.

7

INFRASTRUCTURE AND PUBLIC SERVICES

7 INFRASTRUCTURE AND PUBLIC SERVICES

Growth that is sustainable in terms of resources and services is a major theme of the Plan. For public facilities and services, sustainability means ensuring that new development does not create demands that cannot be met without diminishing the quality of available services. This chapter specifically establishes:

- Policies and standards for public facilities, utilities, and services, that will maintain or enhance the quality of life in Santa Fe;
- Procedures to ensure that growth is approved only upon availability of water and sewer service;
- Thresholds and performance criteria for use in development review to gauge the ability of public services to sustain growth;
- Policies to ensure that infrastructure and public facilities are designed in an environmentally sensitive manner and promote conservation, recharge, and waste volume reduction; and
- An equitable method for paying for facilities and services needed to accommodate new development.

The following themes and guiding policies apply to this chapter:

THEMES

- Affordable Housing - Actively participate in the creation of affordable housing.
- Quality of Life - Enhance the quality of life of the community and ensure provision of community services for residents.
- Sustainable Growth - Ensure that development is sustainable and that growth, conservation, redevelopment, and natural resource protection are balanced.
- Regional Perspective - Maintain a regional growth management perspective.
- Water - Undertake comprehensive efforts to conserve water and ensure adequate supplies with growth.
- Character - Maintain and respect Santa Fe's unique personality, sense of place, and character.
- Urban Form - Promote a compact urban form and encourage sensitive/compatible infill development.

GUIDING POLICIES

7-1 WATER SUPPLY

7-1-G-1 Promote measures to increase the surface water supply available to the city.

7-1-G-2 Ensure that new development and utility service extensions are approved only upon proven water availability and adequacy of the distribution and treatment system.

7-1-G-3 Examine options for financing new water and wastewater infrastructure as well as the technical feasibility, thereby enabling the Governing Body to decide who will pay for water projects while considering projected cost impacts and the potential public benefits of major projects.

7-1-G-4 Maintain and update water transmission, distribution, storage, and source of supply infrastructure.

7-1-G-5 Develop and implement a comprehensive, integrated water resource plan for water retention and conservation for sites, buildings, uses, landscapes, and plumbing fixtures.

Conservation policies must be enforced. Water conservation and water collection policies must be established and required for existing (within five years) and new development, especially at commercial and government locations, and the drilling of new wells where municipal water service is available must be prohibited.

7-1-G-6 Promote measures to protect the acequias, aquifer, and quality of water supply for the city and county residents.

7-1-G-7 Ensure that the extension of water service is in accordance with the city's regional growth objectives.

7-1-G-8 Promote regional water resource planning initiatives and develop sound management policies to protect regional water resources, create water banking mechanisms and minimize water right speculation.

7-1-G-9 Promote implementation of the *Treated Effluent Management Plan* which prescribes the optimum use of the treated wastewater effluent as an additional source of water supply.

7-1-G-10 Develop and use water resources that are reliable and sustainable and that are fiscally responsible while preserving groundwater resources for drought emergencies.

7-2 WASTEWATER MANAGEMENT

7-2-G-1 Maintain environmentally appropriate wastewater management practices.

7-2-G-2 Maintain and update the existing wastewater treatment system.

7-2-G-3 Ensure that adequate system capacity responds to future growth and regulatory demands.

7-2-G-4 Develop programs that facilitate and improve maintenance and replacement of the wastewater collection system.

7-2-G-5 Ensure that extension of wastewater service is in accordance with the city's regional growth objectives.

7-2-G-6 Ensure that a *Treated Effluent Management Plan* will optimize reuse and recycling of treated wastewater for nonpotable uses and be a significant part of integrated water resources planning.

7-3 SOLID WASTE MANAGEMENT, WASTE REDUCTION AND RECYCLING

7-3-G-1 Reduce solid waste volumes by increasing recycling and reuse to increase the life span of the city/county landfill, for conservation of natural resources, and to reduce costs associated with solid waste management.

7-3-G-2 Protect and preserve public health.

7-3-G-3 Develop strategically located solid waste convenience centers, yard waste processing, and other facilities in accordance with growth management objectives.

7-4 STORMWATER MANAGEMENT

7-4-G-1 Protect and preserve human life, private property, and public facilities from severe weather conditions.

7-4-G-2 View the drainage system as a whole entity rather than as a sum of its components.

7-4-G-3 Promote natural drainage and recharge of the aquifer and capture of runoff by establishing innovative stormwater management practices and standards.

7-4-G-4 Develop and maintain a citywide, user-supported storm water operation, maintenance, and improvement program.

7-5 PRIVATE UTILITIES

7-5-G-1 Work with utility providers to ensure adequate service is provided for existing and new development within the city.

7-5-G-2 The City of Santa Fe will continue to monitor scientific research regarding the effect on human health due to exposure to electric and magnetic fields. The City of Santa Fe will work with electric, telecommunication, and other facility owners that maintain facilities that emit electric and magnetic fields, and the public to reach public policy consensus regarding the electric and magnetic fields issue..

7-5-G-3 The City of Santa Fe will work with utilities (i.e., electric, cable television, telephone, etc.) that own, operate, and maintain overhead wire facilities, to develop a program to place underground, existing and new overhead facilities, particularly along major arterials. The City of Santa Fe will identify funding sources to pay for the placement of new and existing overhead lines underground.

Locating electrical wires below ground and along arterials will improve the aesthetics of the streetscapes and open up views of the surrounding landscape.

Appropriate procedures, in accordance with the Archaeological Review District Ordinance, should be taken when placing electrical wires below ground to protect archaeological resources.

7-5-G-4 Formulate a citywide energy saving policy and program to cut costs and keep dollar resources in Santa Fe.

7-5-G-5 Incorporate practicable solar energy, wind generation, and wind protection concepts in the design and siting of new structures.

Solar energy is an available energy alternative for a future of shrinking natural resources and a booming population.

Wind can generate electric power and can cool structures in the summer. In winter, structures need to be protected from the wind.

7-6 IMPACT FEES

7-6-G-1 Use impact fees as an additional source of revenue to pay all or part of the costs of capital facilities for water supply, wastewater, arterial roads, signalization, parks, open space trails, drainage facilities, fire, police and emergency services generated by new growth in the city and county.

Utilization of impact fees can be extended to facilities for which they are not currently assessed.

7-6-G-2 Develop a comprehensive impact fees program which meets all requirements of the New Mexico Development of Fees Act, Section 5-8-1 et seq., New Mexico Statutes Annotated (NMSA) 1978.

The current impact fees in effect do not comply with all statutory requirements.

7-6-G-3 Utilize impact fees as part of a regional growth management strategy, with higher fees assessed in areas which are not currently served by capital facilities, and lower fees assessed in areas which already have capital improvements in place.

Impact fees may be structured to implement policies related to growth in the Urban Area and infill development areas.

7-6-G-4 Develop impact fees in coordination with Santa Fe County to ensure that the county implements city and county policies for growth and for development of capital facilities in the Urban Area, in areas identified for annexation, and in the Extraterritorial Zone.

Impact fees should be utilized to finance eligible capital facilities in the Extraterritorial Zone to ensure planned, seamless growth which will not unduly burden city facilities in an agreed-upon urban area.

7-6-G-5 Waive impact fees in order to implement other city policies, including affordable housing, infill development, and economic development.

Waiver of impact fees should provide incentives which will help implement these policies. The city should identify other sources of financing for capital

improvements to replace revenue from impact fees waived to meet other policy objectives.

This Plan already contains policies advocating affirmative measures to create affordable housing. The city will have to determine if it wants to waive impact fees to fulfill other policies and ensure that these policies are clearly set forth in this Plan.

7.1 WATER SERVICE

7.1.1 WATER SYSTEM

Water service is provided for nearly all Santa Fe residents by the City of Santa Fe through the Sangre de Cristo Water Services Division. The City of Santa Fe acquired the Sangre de Cristo Water Services Division from Public Service Company of New Mexico in July 1995. The purchase included all physical facilities and water rights required to produce and deliver water. The existing service area includes all land within the corporate limits of the city, plus some portions of the Extraterritorial Zone. The latter are served based on agreements made between the utility's previous owner and the individual customers. Figures 7–1 and 7–2 show the existing water service area and schematic system layout to serve future development. As part of the purchase agreement between the city and Public Service Company of New Mexico, Public Service Company of New Mexico Water Services would continue to operate the water system on behalf of the city for a period up to four years. The Sangre de Cristo Water Services Division, part of the city's Public Utilities Department, is responsible for the management of water and for the development of an integrated water resource management plan. This is a 40-year plan needed to provide for water right reservations as required by state law. The city is currently leading the effort to develop a regional water plan. Growth patterns identified through the General Plan will be utilized for determining the needs for future supply development.

7.1.2 WATER SYSTEM FACILITIES

The main features of the city's water supply system are the Santa Fe River storage dams and treatment plant, the city well field, the Buckman well field, the storage tank system, and the distribution network. The total production for 1995 was 3.97 billion gallons, generated by three separate sources – the Santa Fe River watershed, the city well field, and the Buckman well field. These sources produce 41, 14, and 45 percent, respectively, of the total supply. During the summer of 1996, the city experienced a severe drought which resulted in a 20 percent reduction in the available water supply. The city quickly implemented emergency regulations that limited water consumption and potential waste of the resource during the crisis. A long-term conservation ordinance was later adopted to reduce water consumption during the peak months of the year between June and October.

Santa Fe River Watershed

This source provides the highest quality water at the lowest production cost, about $0.47 per 1,000 gallons. However, this source is the most affected by variations in annual precipitation. Annual yields may vary widely between a maximum allowable diversion from the reservoir system of 5,040 acre-feet and the historic low yield of less than 1,000 acre-feet that occurred in 1951. The average annual flow identified during the entire period of record, beginning in 1914, is 4,650 acre-feet.

The system's treatment capacity provides for an average flow of 10 million gallons per day. For relatively short periods of time, a combination of conventional treatment and a filtration plant can be used to produce an additional two million gallons per day.

Santa Fe Well Field

These wells tap the Tesuque formation, which is locally recharged by the Santa Fe River. The wells were originally developed in the 1950s and 1960s. Some upgrades were performed in the 1980s, but for the most part, these wells are nearing the end of their design life. The condition of the wells and the lowering of the water table has led to a reduced production from 4,000 acre-feet (2,600 gallons per minute) in the 1970s to 2,600 acre-feet (1,600 gallons per minute) today. Furthermore, water production from three of the eight wells has been either curtailed or totally restricted due to contamination problems. The cost of production for this well system averages $0.51 per 1,000 gallons. The city is executing an extensive well reconstruction program to recover lost production in this well field.

Buckman Well Field

The Buckman well field is located approximately 15 miles northwest of the city, adjacent to the Rio Grande. This system consists of eight wells drilled to depths between 900 and 1,600 feet into the Tesuque formation, plus four booster stations, a 20-inch transmission line, and a ten-million gallon storage tank located in the northwest sector. The cost of production for this system averages $1.10 per 1,000 gallons.

Water from the Buckman wells is the most expensive produced in the system, because of the high costs of raising it 1,500 feet from the Rio Grande to the city. Pumping at Buckman is generally used to supplement the other two sources and is thus heaviest during summer peak demands. As the city has continued to grow, so has pumping at Buckman, which in 1995 approached 6,000 acre-feet (out of a total 13,240 acre-feet). Should there be a significant drought, the city would have to rely even more heavily on the Buckman and Santa Fe wells.

Storage and Distribution Network

Water from all three sources is treated with chlorine and fluoride prior to delivery into a network of storage tanks and 420 miles of transmission and distribution lines. The storage system consists of nine tanks ranging in size from 500,000 to 10 million gallons, totaling 35.1 million gallons.

Operations and Maintenance

In 1995, the system provided water for 24,000 customers with metered service. Of these, 21,000 were residential customers, while the remaining 3,000 were institutional and commercial, include multifamily dwellings. Residential water use is approximately 52 percent of the total. An estimated eight to ten percent of the total production is lost to line leaks, while an additional five percent is delivered but under metered. The peak daily production in 1995 was 20 million gallons/day, while the peak daily demand was 22 million gallons/day. The peak daily production was exceeded during 12 nonconsecutive days during the year's summer.

7.1.3 WATER SUPPLY AND WATER RIGHTS

The city holds six distinct, separate water rights, as summarized in Table 7.1 below.

TABLE 7.1
CITY WATER RIGHTS

Water Rights	Type	Quantity (acre-feet per year)
1. Santa Fe River	surface	5,040.0[a]
2. Santa Fe River	groundwater	4,967.0
3. Buckman Wells	groundwater	10,000.0
4. Rio Grande	groundwater	130.9[b]
5. Rio Pojoaque	surface	47.4[b]
Rio Tesuque	surface	28.0[b]
6. San Juan-Chama	surface	5,605.0[b]

[a] Santa Fe River Canyon supplies include St. Michael's Well

[b] These rights are collectively used to offset the pumping effects of Buckman pumping on the Rio Grande and the tributaries.

Santa Fe River Watershed

The Sangre de Cristo Water Services Division has successfully reconstructed the Ferguson and Alto wells and has redrilled the Torreon well. The Santa Fe well is being refurbished as part of an aquifer remediation program. Of all the sources, the Santa Fe River water is most affected by drought. The reservoirs on the Santa Fe River depend on snow-melt and rainfall in the Sangre de Cristo mountains—consequently their yield varies from year to year. In a good year, the reservoirs yield the entire 5,040 acre-feet that the city is permitted to use from the river. However, in 1951, a drought year, the yield dropped below 1,000 acre-feet.

Santa Fe Well Field

The city's wells, which tap into the Santa Fe River aquifer, are aging, and consequently their yield has dropped from over 4,000 acre-feet annually, in the early 1970s, to around 2,000 acre-feet currently. Furthermore, in the last five years, two of the eight wells have been found

to be contaminated by petroleum by-products. Adding new wells in the city, or replacing existing ones, is difficult and expensive. Most of the city wells were drilled before 1956, the year the State Engineer established the Rio Grande Basin. Once the Basin was declared, public hearings were required before new wells could be drilled. Only two new wells were drilled in the city after 1965, and both faced heated opposition from other well owners in the area. The only city well added to the system in the last 30 years was a preexisting well hooked onto the system in 1991.

Buckman Well Field

The Buckman well field is located approximately 15 miles northwest of the city, adjacent to the Rio Grande. The city has the right to take up to 10,000 acre-feet annually from the Buckman wells. A requirement of the permit for this right is that the city must have water rights on the Rio Grande and Pojoaque-Nambe and the Tesuque to offset the effects of the pumping on these streams.

It must be recognized that the offset requirements for the Buckman well field will increase with time and, in theory, will eventually reach 100 percent of the total produced for this purpose. The city and the county of Santa Fe hold 5,605 acre-feet of San Juan-Chama Project water through a contract with the U.S. Bureau of Reclamation. The Buckman Rio Grande offset requirements are met using a portion of this water. There is a significant annual surplus, which has resulted in storage of about 30,000 acre-feet in reservoirs on the Rio Chama. This is also available for surface diversion. Other water rights held are those required for tributary offsets on the Pojoaque-Nambe and Tesuque stream systems. These requirements are currently less than 140 acre-feet annually, but will increase with time if Buckman wells continue to be pumped at current or increased rates.

Offsetting the effects of the Buckman pumping on the Rio Grande has not been a problem in the past. To date, the city's allocation of San Juan-Chama water (water diverted from the San Juan River to the Rio Grande via the Chama River, and allocated to users in the Rio Grande Basin) has been more than adequate to offset these. However, offsetting the effects on the tributaries has proved more difficult, because there are very few rights for sale on these. One measure of their scarcity is their price. One acre-foot of water rights per year on the Pojoaque-Nambe currently cost around $10,000-20,000 (bid and asked) per acre-foot, and on the Tesuque approximately $25,000-50,000. This compares to prices of approximately $1,500-3,000 for one acre-foot for water rights on the Rio Grande.

7.1.4 WATER DEMAND

The city Sangre de Cristo Water Services Division has planning responsibilities to ensure an adequate production margin exists between total demand and total supply such that the city is not vulnerable to drought, aquifer degradation, and system failures. Industry specialists recommend a minimum 10 percent production margin over total demand, but the city aims at a 20 percent target reserve margin. In 1995, the production margin was calculated to be only 3.5 percent, even as the full supply of 5,040 acre-feet from the Santa Fe River and an overdiversion of the San Juan-Chama water of 240 acre-feet were utilized.

State water law allows for municipalities, counties, and universities to reserve water rights for a 40-year planning period. Reservations are granted by the State Engineer based on realistic growth projections and reasonable expectations that water is available for

appropriation or acquisition. The city's 1995 water-rights ownership of approximately 20,000 acre-feet and the current methods of utilizing these rights is adequate for the projected average annual growth for the short-term only (three to five years). Additional water supplies and resource optimization measures will be necessary to meet even the minimum growth rate anticipated (Table 7.2).

TABLE 7.2
POPULATION AND WATER DEMAND PROJECTIONS FOR THE URBAN AREA TO 2020

Year	Planning Area Population	Water Demand in Acre-Feet	Percent Increase Per Year
1985	52,890	8,150	–
1987	57,099	9,134	6
1990	63,412	10,073	3
1993	69,024	11,641	3
1995	72,766	11,693	3

Notes:

1. Population projections from Southwest Land Research.
2. 1985–1993 historical water demand data from City of Santa Fe.
3. Future population projections may change based on decisions made on the General Plan (buildout potential).
4. Population in column 1 is larger than the population served by Sangre de Cristo Water Services Division. Therefore, water projections in column 2 should not be used to calculate average per capita use..

Source: Bohannan-Huston

7.1.5 FIVE-YEAR STRATEGIC PLAN

Elements needed to manage water resources over the short-term planning scenario include the implementation of a comprehensive citywide water conservation program, full development of the existing surface and groundwater resources to the limits allowed by water rights and implementation of an effluent reuse management plan. These efforts will allow the city to increase the reserve margin in the supply system and meet the short-term anticipated growth. Toward the end of the five-year period, construction of a surface water diversion system on the Rio Grande will provide the city and county with an opportunity to take full and direct advantage of the San Juan-Chama water and other water sources.

7.1.6 ACEQUIAS

Acequias are irrigation ditches which made agriculture possible for the Indian and Hispanic settlers in early New Mexico and have served a very important cultural and economic role in the community. Acequias traditionally have cooperative ownership and maintenance responsibilities that closely knit communities together. In addition to distributing water and

defining communities, acequias are a political subdivision of the State of New Mexico, established pursuant to sections 73-2-1 to 73-2-64 NMSA 1978.

Individual members of an acequia hold water rights. Under New Mexico water law, these water rights may be severed from the land and the acequias to which they are appurtenant, where they are used for agricultural purposes, to other locations, to be used for other purposes. As a result, the survival of acequias in Santa Fe is increasingly threatened by transfer of water rights for industrial and other urban and recreational uses. Loss of communal responsibility for the acequias results in the destruction of the cultural and economic viability of the community.

Diversion of water from acequias also threatens one of the region's major resources. Since 1985, the state has required that the criterion of water conservation and public welfare, in addition to the criteria of impairment of existing water rights, be applied to applications for transfers of water rights. If the city's and county's public interest included preservation of acequias and the water within them for agricultural uses, this would have to be considered by the State Engineer in making transfer decisions.

Retirement of water rights is another form of "transfer," which threatens water resources in the Santa Fe area. Retirement particularly impacts acequias and agricultural lands due to pressure to "retire" water rights from rural areas for use in urban areas.

Alternatives for preserving water rights in acequias include enhancing the viability of agricultural uses, pooling of water rights to prevent individual sales, and holding water rights in trusts. Acequias can also be listed in the National Register as historic structures or districts, because they symbolize agricultural settlement and an agricultural way of life from earlier periods. As a result, they can be regulated through zoning. Transfer of development rights programs can also be utilized. Figure 7-3 shows the location of all historic acequias in Santa Fe.

The city fully recognizes the senior rights that the four remaining acequias maintain. The Sangre de Cristo Water Services Division is actively working with the respective mayordomos to help reserve their ability to utilize the water for traditional purposes.

7.1.7 TREATED EFFLUENT MANAGEMENT PLAN

The city is nearing completion of a *Treated Effluent Management Plan* which would set the parameters for the optimum utilization of treated wastewater effluent as an additional source of water supply. The plan will be implemented over the planning period, supported by the rate payers and other treated effluent users. Table 7.3 below summarizes the current commitments that the city has with regard to private use of this resource.

TABLE 7.3
(1995) CITY OBLIGATIONS FOR TREATMENT PLANT EFFLUENT

User	Million Gallons Per Day
Santa Fe Country Club	0.70
Santa Fe Green Polo Fields	0.70
Santa Fe Racing (The Downs)	1.20
Regional Landfill/Golf Course	2.00[a]
Total Obligation	**4.60**

[a] Committed for future use.

Source: Bohannan-Huston

7.2 WASTEWATER MANAGEMENT

The city's wastewater treatment facility was built in 1963 on Paseo Real, just north of the Municipal Airport and has been updated and expanded several times since. Wastewater is managed by the Wastewater Management Division, which performs all administrative duties, plant operations, plant maintenance, development review, facility planning, treatment, collection-system maintenance and repair, and mapping and modeling of the city's sewer system.

The wastewater service area generally includes lands whose sewage can drain by gravity to the city's wastewater treatment plant. This area includes all lands within the incorporated limits, plus some outside of it. The county has adopted the city's sanitary sewer regulations (Chapter 22 of the City Code) and both entities have a joint powers agreement for the enforcement of such regulations in the unincorporated areas served by the city's system. Portions of the service area that do not comply with the gravity flow criterion described above, such as Monte Sereno, Pueblos del Sol, Nava Ade, and others have been authorized to be served via pressurized sewers for that period of time until gravity flow sewers become available for their use. The service area based on the gravity flow criterion was adopter by City Council in September of 1985, as part of the federal grant agreement the governing body approved for the financing of wastewater system improvements.

7.2.1 COLLECTION SYSTEM

The existing (1996) public collection system consists of approximately 280 miles of gravity sewer lines. Growth over recent years has averaged seven to ten miles a year.

Several lift stations, some of which are privately operated and maintained, are used because of topographical constraints to gravity flow. The treatment plant receives an average of more than seven million gallons/day of raw sewage, representing a total load of biodegradable solids of 13,000 pounds of biochemical oxygen demand. Daily peak flows are approximately 1.85 times the daily average. Figure 7-4 shows the existing and proposed wastewater system.

To minimize the potential for soil and groundwater contamination by malfunctioning septic systems, the city discourages on-site treatment facilities. In addition, where terrain or other environmental conditions prevent construction of or maintenance access to gravity lines, the city encourages installation of low pressure grinder pump systems. This results in low maintenance package units on the homeowner's property, as well as low pressure sewer in the street. At this time, the installation and maintenance of the grinder pump units are the responsibility of the homeowner.

7.2.2 CURRENT PLANNING EFFORTS

Expansion of Collection System and Treatment Plant Capacity

Some of the existing facilities have reached their hydraulic limits with the existing flows. The city maintains a five-year plant improvements project, part of the purpose of which is to keep pace with growth and regulatory demands. Included in the five-year plant improvements project is design and installation of ultra-violet disinfection facilities to comply with regulatory requirements. A large percentage of the wastewater collection system suffers from root intrusion and grease accumulation that limit their capacity and increase the likelihood of sewage overflows.

Sewer Replacement Program

The city began funding a collection system rehabilitation program in 1988 to plan, design, and implement rehabilitation and replacement of failing sewer lines. Rehabilitation of the collection system is an on-going priority. The sewer infrastructure in older areas of Santa Fe are deteriorating and are in need of replacement. In addition, the city is faced with the replacement of existing concrete sewer pipes because of advanced deterioration from hydrogen sulfide gases which are present in the sewer. Replacement projects will need to be funded to keep up with the city's aging infrastructure. Replacement of aging sewer infrastructure in certain areas of the city must always be assigned a high priority, in order to preserve the system's ability to meet its demands and purpose, protecting the environment as well as public and private property from damage. Funding must be earmarked annually for this task and generated as part of the rate revenue.

Wastewater Master Plan

In 1990, the city began a three-phase *Wastewater Master Plan*, of which the first two phases have been completed. Phase 1 consisted of a flow monitoring study to establish existing wastewater flow rates and identify potential capacity problems. Phase 2 consisted of compiling an inventory of the existing collection system and developing a computer model to calculate flows and capacities in all major trunk sewers. In addition, Phase 2 identified capacity deficiencies, evaluated the condition and maintenance of the collection system, and developed a facility management system. Phase 3 will address expansion of the collection system. The *Wastewater Master Plan* will need to be updated based on the new General Plan and the new land use assumptions/service area boundaries. The new master plan will also take advantage of the information that is being collected on the Geographic Information System and will likely have a new wastewater flow capacity model that works with the Geographic Information System.

Photographs

7.2.3 GROWTH AND REUSE

System Expansion to Accommodate General Plan Growth

To accommodate growth, the city would need to extend existing interceptor lines to areas proposed for urban development, currently reliant on on-site waste systems within the city limits, and potentially within the Urban Area. The majority of areas planned for development would be served by gravity flow, while a few areas would require the construction of lift stations.

Reuse

The *Treated Effluent Management Plan* has been completed and will be implemented over the next few years. Final alternatives are being developed now to optimize the reuse and recycling of wastewater for nonpotable uses and include a long-term approach that supports the city's overall water resources strategy. The preliminary concept is to optimize delivery of nonpotable secondary effluent for irrigation, in-stream flows to the Santa Fe River downstream of the wastewater treatment plant, and provide a return flow of treated effluent to the Rio Grande. In addition, effluent may be pumped upstream to just below the city's raw water reservoirs to augment flow in the Santa Fe River through the Downtown area for recreational use and for indirect recharge of the Santa Fe city wells. It is not anticipated at this time that the city will recharge the Santa Fe Basin aquifer through a series of injection wells.

Aquifer Recharge

A technique used in some parts of the country is to recharge the aquifer by pumping the effluent from a treatment plant through a series of injection wells.

7.3 SOLID WASTE

Like elsewhere in the country, burying refuse has been the only disposal method employed through much of this century in Santa Fe. Although waste incineration has been practiced in the city from the late 1920s, the practice was brought to an end in the 1960s. In the last twenty years the city has modified collection methods and made efforts to reduce the volume of solid waste; however, landfilling remains the final form of disposal. The City is committed to reducing its solid waste stream and promoting waste reduction, composting, and recycling.

7.3.1 DISPOSAL

The city landfill which had been operated in the northwest sector for most of the past thirty years is no longer operational. A new city-county landfill, designed and constructed to operate in accordance with the latest federal and state regulations has been opened in place of the old facility. To provide a centralized point of concentration for the refuse collected within the service area and to reduce the cost of transporting this refuse to the new landfill, the city owns and operates a modern transfer station in a location adjacent to the old landfill site. This facility was designed for a capacity of 500 tons of refuse a day. In order to meet the needs of present and future development in the southern and southwestern quadrants, smaller solid

waste collection facilities or convenience centers will be developed. The location and capacity of each individual center will be as dictated by the solid waste management master plan to be developed and periodically updated by the Solid Waste Management Division.

Landfill Closure

The old landfill facility will be closed in accordance with federal and state requirements and conditions contained in the closure plan. Landscaping and land use consistent with this plan will be funded for design and implementation.

Regional Landfill

The regional landfill is designed to meet the city's and the county's disposal needs for 100 years. The governance of the facility has been delegated by a joint powers agreement to a board comprised of four City Council and four County Commission members. The agreement, which was approved in February 1995, created a Solid Waste Management Agency and designated the Board as the managing authority of the agency.

The adoption of new methods of waste reduction or reuse (e.g., a materials recovery facility) by one locality could significantly affect the financial integrity and operational efficiency of the regional landfill. For this reason, the city and the county must maintain a continuous dialogue regarding new waste management ventures.

Transfer Station

The city's solid waste transfer station began operations in May of 1997, under a permit granted by the State of New Mexico and in compliance with federal and state regulations. This facility is required to process and evacuate all waste received each day of operation, with the exception of recyclable material which can be stored as required. Waste is transferred to the city-county landfill by tractor trailers with a cargo capacity of 20 tons. Transfer traffic is ultimately designed to use the Santa Fe Relief Route, thus avoiding the transportation of high volumes of solid waste through urban arterial roads.

7.3.2 WASTE VOLUME REDUCTION PROGRAMS

Several initiatives are being pursued toward reducing the volume of waste generated in the city's service area. These initiatives include recycling of waste materials, reduction of waste at the source, waste exchange, backyard composting, green waste processing and utilization, and construction and demolition waste reprocessing.

7.3.3 LOOKING AHEAD

The city's approach to solid waste collection and disposal—collect and bury—has remained relatively unchanged through the majority of the twentieth century. It has been reactive to the waste disposal needs of the area. However, at the end of the century, the city finds itself confronted with a much more complicated and expensive network of waste management issues—transfer and transport, reduction, expanding service areas, and heavily regulated disposal requirements.

Because of this, comprehensive efforts are needed to deal with the financial and operational demands of changing regulations, technologies, service demands, and expectations regarding solid waste collection and disposal. The General Plan provides the overall policy direction for this purpose. However, detailed efforts will be needed, and the General Plan proposes preparation of a comprehensive solid waste management master plan, which should be updated every five years.

7.4 STORMWATER MANAGEMENT

The City of Santa Fe is located within two watersheds: the Santa Fe River (northern Santa Fe) and the Arroyo de los Chamisos (southern Santa Fe). The Santa Fe River Basin encompasses a total of 42 square miles, including the Downtown area, the foothills to the north, Nichols and McClure reservoirs on the east, and the city limits on the west. The Arroyo de los Chamisos Basin encompasses approximately 22.8 square miles, including all areas south of Cordova Road, east of Cerrillos Road, and north of Interstate 25. Storm drainage within the basins is routed mainly through arroyos and a small number of storm drains.

In 1980, the Federal Emergency Management Agency completed a Flood Insurance Study to determine the flows on the major arroyos and the limits of the 100-year floodplain throughout the city. Federal Emergency Management Agency also conducted a Flood Insurance Study for some unincorporated portions of Santa Fe County, which was completed in 1985. Floodplains are digitized in the city's Geographic Information System database and are also shown on Figure 7-5.

Ever increasing development within the greater Santa Fe area drainage system has prompted the need for a comprehensive master drainage plan. In Fall 1993, two drainage management plans were prepared for the city: the *Santa Fe Drainage Management Plan* for the Santa Fe River Watershed, and another for the Arroyo de los Chamisos Watershed. These drainage management plans determine the ability of the existing drainage facilities to pass the 100-year flows, size drainage improvements, determine costs, and set priorities for constructing recommended improvements.

The city's storm drainage control structures in the Urban Area are not considered adequate for existing conditions. Without appropriate modifications to the system, further development would increase the potential for flooding and property damage. Upgrades to a number of crossing structures and a conveyance system or another improvement are needed. The *Drainage Master Plan*, which is being updated, will identify potential improvements and establish an implementation schedule.

Increases in impervious surfaces because of development have resulted in increased runoff and decreased water recharge. General Plan policies focus on minimizing runoff, especially during peak-flow periods; ensuring adequate drainage; and locating development to minimize damage from flooding. Strategies to address increased runoff include small-scale site water retention facilities, water harvesting, and detention ponds. One example of a water harvesting technique is the construction of storm-drain leach fields parallel to arroyos. Storm drains are perforated allowing the flow to seep back into the ground. A detention

pond would hold back water and also help water to leach back into the ground. These systems have the following drawbacks: detention ponds tend to capture sediment thereby increasing erosion problems downstream and water harvesting has high capital costs.

7.5 PRIVATE UTILITIES

7.5.1 GAS SERVICE

Gas service for the greater Santa Fe area has been provided by the Gas Company of New Mexico since 1930. Gas Company of New Mexico customers in the service area are 89.7 percent residential, 9.7 percent commercial, and 0.6 percent public authority.

Gas Company of New Mexico Line Extension Policy

Gas Company of New Mexico extends its mainlines in accordance with its Rule 16, Extension of Mains. Gas Company of New Mexico estimates the cost of extension and gives a credit for residential customers for the cost of 150 feet of the mainline extension and three times the estimated annual cost of service revenue for commercial customers. For extensions where the estimated investment exceeds the credit allowance, an extension agreement is executed and payment of an advance for construction is required. The advance is the difference between the credit allowance and the estimated cost of extension.

Gas Company of New Mexico anticipates city and county growth by selectively increasing mainline pipe size to a size greater than necessary to serve the immediate customers. Gas Company of New Mexico rarely installs mainlines without customers' requests. According to Gas Company of New Mexico, the distribution system in Santa Fe is in excellent shape for projected growth for the next ten years. Capacity problems are not anticipated based on buildout projections.

7.5.2 ELECTRICAL SERVICE

Electrical service is provided to Santa Fe by the Public Service Company of New Mexico. The Santa Fe area is connected to the New Mexico transmission system by three 115 kV lines. Two of these lines function primarily as a source of electric service for the Santa Fe Area, the third line functions primarily as source to the Las Vegas and northern New Mexico areas. The three 115 kV lines are connected to the Zia switching station located on Richards Avenue south of Rodeo Road. At Zia there are three 115/46 kV transformers which are the source for electric service for the Santa Fe 46 kV electric system (Figure 7-6). Public Service Company of New Mexico anticipates that components of the electrical system in the Santa Fe area will need to be upgraded in the late 1990s due to the age of the existing electrical system and to meet the growing electric service requirements of the City of Santa Fe and the county.

One goal of this document is to preserve the historical appearance of neighborhoods (Figure 7-7). However, while underground electrical service is desirable from an aesthetic standpoint, it remains expensive due to many factors, including higher maintenance costs, decreased reliability, increased labor costs, etc.

Furthermore, the abundance of archaeological sites within the Urban Area may make underground extensions more costly and difficult to install in certain areas.

Electric and Magnetic Fields

Research conducted over the past decade has caused much debate over the health effects associated with electric and magnetic fields. Attention to this research and the presence of high voltage transmission lines in the Urban Area, has increased the awareness of the suspected, but unproved, threat of adverse health effects resulting from exposure to electric and magnetic fields. Electric fields are produced in electrical lines, because of the amount of voltage applied to a conductor. Electric field strength falls off dramatically with distance, and many objects, including trees and houses shield electric fields. The predominant amount of residential exposure to electric fields is a result of household appliance use.

Magnetic fields are a result of the strength of the movement of electricity (current) through a conductor. As with electric fields, magnetic field strength decreases dramatically with distance from the source; this is especially true with appliances. Unlike electric fields, magnetic fields are not shielded by objects such as trees and buildings.

Exposure to electric and magnetic fields is an existing circumstance typical in urban communities. Whether the fields originate from appliances or high voltage transmission lines, public and scientific concern exists regarding exposure and the potential for human health effects. The relationship between electric and magnetic fields exposure and health effects has yet to be scientifically proven; results from the laboratory and epidemiological studies that have taken place are conflicting and inconclusive. Scientists to date have not found threshold values, dose-response, or proven physiological causative relationships that demonstrate physical effects from electric and magnetic fields.

Under the recommendation of scientists in the field, several utility companies and many jurisdictions have addressed the electric and magnetic fields issue through a policy of prudent avoidance as the best way of limiting exposure to electric and magnetic fields. The New Mexico Public Utilities Commission has not adopted regulations on the siting of high voltage transmission lines to reduce electric and magnetic fields exposure; however, Public Service Company of New Mexico does have an electric and magnetic fields Task Force which discusses scientific findings on the subject and monitors experience in other areas of the country.

Not siting transmission lines near schools and day care centers shall be part of a "prudent avoidance" strategy. At present, Public Service Company of New Mexico does electric and magnetic fields measurements on site to help residents understand what their exposure to electric and magnetic fields is. Public Service Company of New Mexico also participated in the work of the city’s Facility Siting and Environment Committee in 1990. The 1990 committee also established the following goals for the planning, siting, and remediation of electric facilities:

- **Health and Safety:** To protect human health and the environment;
- **Demand and Reliability:** To consider conservation alternatives and use realistic demand projections;
- **Economics and Aesthetics:** To consider economic and visual impacts on all sectors;

- **Processes:** To use processes which maximize efficiency, accountability, and public involvement; and
- **Accountability:** To implement the goals, objectives, standards, and processes described in this document in a way which maximizes public trust in the electric utility company and city and county governments.

The following at a minimum should be considered in the development of a facility plan:

- Projected electric and magnetic fields contour line profiles during operation of at least one preferred and one alternate route;
- Electric and magnetic fields contour lines for 2, 4, and 10 Mg (millgausse) for an existing powerline of similar characteristics as the preferred alternative;
- At a minimum, consideration and discussion of design alternatives with respect to electric and magnetic fields; "underground" alternative conductor configuration and phasing, tower height and diameter, and right-of-way width;
- Aesthetic design considerations including "undergrounding," adjacent structures, character of the neighborhood and landscaping;
- Survey of all structures adjacent to the proposed right-of-way and their current uses;
- Estimate of population demographics within adjacent neighborhoods;
- Cost-benefit and risk analysis of alternate routes; and
- Design of a public participation and notification process.

7.5.3 ALTERNATIVE ENERGY AND CONSERVATION

Fossil-fuel burning, and forestry and agricultural practices are responsible for most of the man-made contributions to the gases in the atmosphere that act like a greenhouse to raise the Earth's temperature: hence the term "greenhouse effect." Most of the processes that produce greenhouse gases are common everyday activities such as driving cars, generating electricity from fossil fuels, using fertilizers, and using wood-burning stoves. Because so many of these activities are so ingrained in modern society, reducing emissions is a difficult task.

Environmentally, the potential effects of climate change are extensive. The Earth's ecosystems, water resources, and air quality could all experience profound impacts; agriculture and forestry could be seriously affected.

In the nineties, there is now a growing interest in using energy resources more wisely than in the past. With concern about America's dependence on foreign oil or the pollution caused by using fossil fuels, the idea of living within our means—sustainable energy use—continues to gain in popularity. In a larger context, the use of renewable resources promote greater self reliance, energy stability, and a cleaner environment for future generations.

7.5.4 SOLAR ENERGY

Solar energy has the greatest potential for meeting current and future energy demands. Solar collectors covering less than one percent of U.S. territory—one-tenth the area devoted to

agriculture—could make more energy available than the United States consumes in a year. Hydroelectric power has the least room for expansion, since about half of the river resources in the United States have already been developed, with much of the rest barred from development by federal environmental legislation.

Architecture in the twentieth century has been characterized by an emphasis on technology to the exclusion of other values. In the built environment this concern manifests itself in the materials we build with, such as plastics and synthetics. There is an existing dependence on mechanical control of the indoor environment rather than exploitation of climatic and other natural processes to satisfy our comfort requirements. In a sense, we have become prisoners of complicated mechanical systems, since windows must be inoperable and sealed in order for these systems to work. A minor power or equipment failure can make these buildings uninhabitable. Today, little attention is paid to the unique character and variation of local climate and building materials. One can now see essentially the same type building from coast to coast.

Today, there is a strong, new interest in passive solar heating and cooling systems because they simplify rather than complicate life. Passive systems are simple in concept and use, have few moving parts and require little or no maintenance. Also, these systems do not generate thermal pollution, since they require no external energy input and produce no physical by-products or waste. Since solar energy is conveniently distributed to all parts of the globe, expensive transportation and distribution networks of energy are also eliminated.

Since a building or some element of it is the passive system, the application of passive solar energy must be included in every step of a building's design. Whereas conventional or active solar-heating systems can be somewhat independent of the conceptual organization of a building, it is extremely difficult to add a passive system to a building once it has been designed.

7.5.5 WIND ENERGY

Wind turbines are a good example of the growing competitiveness of renewable energy technologies. The cost of electricity produced by modern wind turbines has declined from over 25 cents per kilowatt hour in 1981 to seven to nine cents per kilowatt hour today, and industry estimates suggest it could fall as low as four to six cents per kilowatt hour in five years. At the current price, wind power is competitive, or nearly so, with electricity generated by new fossil-fired power plants, and in the next millennium, it should be one of the least expensive sources of electricity, fossil or renewable.

Reliability problems affecting early wind-turbine designs have been largely resolved, and mature and well-maintained systems are available 95 to 98 percent of the time. Other renewable sources of electricity, such as solar-thermal electric-power plants and photovoltaic cells, also promise to become competitive within a decade, particularly if market demand grows to allow greater production of systems.

7.6 IMPACT FEES

The city and the county both currently assess new development for some of the costs associated with serving that development. The City of Santa Fe passed its Impact Fee

Ordinance in January 1991, and the county has recently developed impact fees to help pay for capital improvements related to fire protection.

7.6.1 NEW MEXICO DEVELOPMENT FEES ACT

The city and county must follow the requirements of the New Mexico Development Fees Act of 1993 (Section 5-81 et seq. NMSA 1978), which establishes the method by which local governments can legally exact fees from new development. The purpose of development, or impact, fees is to generate funds to pay for the capital costs of growth. New residences and businesses place demands on public roads, water and sewer systems, drainage systems, parks, and police and fire facilities. The Development Fees Act enables local governments to charge new development for the costs of the capital improvements needed to serve the new development.

Impact fees are not a panacea for all capital needs. They may only be used to pay for the cost of new capital projects that directly serve growth. They cannot be used to pay for renovations or for deficiencies in service levels to existing development. The projects funded by impact fees must serve the area for which the fees were collected, and the projects must be completed within seven years, at most, from the date the fees are collected. However, impact fees can help the city and county pay for projects that are needed to serve the growth of the community by having new growth pay for the capital facilities necessitated by that growth.

The city and county may structure fees to accomplish other objectives. Reduced fees for affordable housing, economic development projects, or development projects within infill areas or the urban boundary, are typical examples of projects for which fees are subsidized in other communities. Subsidies must be paid from other city or county revenues. The fees paid by one project cannot be used to offset subsidies to another project.

7.6.2 NEED FOR CITY/COUNTY COOPERATION

One of the General Plan themes is to ensure that existing residents and businesses are not burdened with the costs associated with new development. There is also a need for the city and the county to work jointly to establish an impact fee structure to prevent sprawl and ensure realization of the designated Plan uses. The city and county have a joint powers agreement in place and the county has adopted the city's Wastewater Ordinance as well.

Areas of cooperation that have relevance to impact fees include:

- **Water System.** The city and county could plan for areas to be connected to either the city or the county water systems, in order to implement development in the Urban Area. This agreement could then become the basis for assessment of impact fees to finance capital facilities for water supply needed to serve new growth in the Urban Area within the city and within the Extraterritorial Zone.

  If the city and county collaborate to upgrade the Buckman well field, divert water from the Rio Grande, and upgrade the Buckman water supply line, the city and county could agree that the city would undertake this project, with funding provided at least partially by impact fees, if the required nexus between this upgrading and the increased need for water necessitated by growth is made. Impact fees could be assessed by the city both in the city and in the Extraterritorial Zone to be served by this upgraded water supply

system, pursuant to the Development Fees Act, if the city and county enter into a joint powers agreement for the purpose (See 5-8-3. C, NMSA 1978).

A joint powers agreement could also identify areas intended for annexation into the city which are now in the Extraterritorial Zone and could enable the city to assess and collect impact fees in these areas to extend water service to them, as long as service is provided within the seven years required by the Development Fees Act. If the identified area is not annexed or if service is not provided within seven years, then the fees collected would have to be refunded.

- **Wastewater.** The municipal wastewater treatment plant and sewage collection system serve a significant need in the Extraterritorial Zone. The city and the county have developed means for legal cooperation and enforcement of wastewater service related to applicable ordinances in the Extraterritorial Zone. The county includes in its code the same provisions the city has as the basis for sanitary sewer service. This ordinance provides for service in the Extraterritorial Zone within the city's sanitary sewer service area to be offered on the same basis as it is offered anywhere else in the city. The county, on the other hand, is committed by law to enforce city regulations in those parts of its jurisdiction served by city sewer.
- **Streets.** A joint powers agreement might also be utilized to enable the city to assess and collect impact fees in the Extraterritorial Zone for arterial roads, which are both in the city and in the Extraterritorial Zone and are impacted by growth in the Extraterritorial Zone.

The city and the county also have the option of participating in other areas, including fire protection, parks, and community services. The city will need to enter into a new joint powers agreement with the county or amend the current joint powers agreement, to enable impact fees to be assessed by the city in the Extraterritorial Zone.

7.6.3 SANTA FE CAPITAL IMPROVEMENT PROGRAM AND IMPACT FEES ORDINANCE

The City of Santa Fe passed its Impact Fee Ordinance in January 1991 and amended it in October 1991 and in June 1994. The ordinance includes an impact fee schedule, which was also adopted in 1991 and in June 1994. A revised draft incorporating the language of the Development Fees Act is being prepared, and revised land use assumptions and capital improvements plans meeting the requirements of the Act for wastewater, arterial roads, signalization, and parks, for which fees or dedications are assessed will follow adoption of the General Plan. This General Plan will contain broad land use assumptions to guide the city in preparing more detailed land use assumptions and the capital improvements plans needed to meet the Act's requirements (see Urban Area Staging Plan - Chapter 4).

The present ordinance does not provide a clear definition of an impact fee but states that the fee "relates to physical facilities or improvements which are non-exclusive and serve the entire city." State law requires that the impact fee be assessed for capital improvements that have a life expectancy of ten years or more. The city is currently charging impact fees for arterial roads, signalization, and wastewater facilities. The city could also charge impact fees for water supply, treatment and distribution facilities; storm water, drainage and flood control facilities; roads, bridges, bike and pedestrian trails, bus bays, rights-of-way, landscaping, and

any local components of state and federal highways; buildings for fire, police, and rescue, and essential equipment costing $10,000 or more and having a ten-year life expectancy; as well as parks, open space trails, and related facilities (Sec. 5-8-2 NMSA 1978). The impact fee may also be used for preparing the capital improvements plan and up to three percent of the total impact fees collected may be used for administrative costs (Sec. 5-8-4 NMSA 1978).

The impact fee cannot be used for repairs and maintenance of capital improvements, administrative costs (with the exception of three percent noted above), improving the level of service of capital facilities, or libraries, community centers, construction of affordable housing, schools and projects for economic development, and employment growth (Sec. 5-8-5 NMSA 1978).

While there have been no New Mexico judicial opinions interpreting the validity of impact fee, the Development Fees Act provides a firm basis for the imposition of impact fees. The recent Supreme Court decision (Dolan v Tigard, 62 L W 4576, S.Ct. [1994]) has brought exaction under a greater level of scrutiny. However, the California Supreme Court recently decided the case of Ehrlich v City of Culver City (12 Cal. 4th 854 [1996]) which was remanded by the U.S. Supreme Court to be decided in light of its Dolan decision. Ehrlich addressed the issue of impact fees and stated that the Dolan test only applies to ad hoc fees imposed on discretionary basis and not to fees imposed generally or ministerially and according to a legislative scheme.

IMPLEMENTING POLICIES

7-1 WATER SUPPLY

Water Supply and Distribution

7-1-I-1 Maintain a hydrologic database for the Urban Area.

The Sangre de Cristo Water Services Division has a hydrologic model and is updating the database as part of its master plan update.

7-1-I-2 Plan for and construct infrastructure for the purpose of diverting water directly from the Rio Grande via shallow water galleries.

This project should be planned in coordination with Santa Fe County, Los Alamos, and the pueblos.

7-1-I-3 Purchase additional water rights as opportunities for utilizing bonds or other city resources occur, with debt service paid by impact fees in order to prevent future water shortages.

This could include additional water rights on the Rio Grande to add to the current rights to San Juan-Chama water.

7-1-I-4 Maintain at least a one-year “cushion” or 20% margin of water supply and rights to prevent shortages and ensure that water availability does not become a constraint to growth.

7-1-I-5 Prepare an annual report summarizing water supply and availability, and do not approve any annexation, master development plan, or subdivision unless there is an adequate distribution and treatment system.

Preparation of the annual report will be the responsibility of the city's Public Utilities Department. The report should be presented to the Planning Commission and forwarded to the Planning and Land Use Department to ensure that annexation approvals are in accordance with water availability.

7-1-I-6 Regulate use of wells within the city's service area.

7-1-I-7 To the extent possible, phase water infrastructure construction and water rights acquisition in order to minimize cost impacts to current and new ratepayers.

7-1-I-8 Maximize use of available surface water including treated effluent.

7-1-I-9 Preserve and reserve groundwater for peaking and prolonged drought through optimization of sustainable groundwater use.

7-1-I-10 Help protect existing water rights for users such as acequias and community wells through noncompetitive water development strategies and regional water planning.

7-1-I-11 Support projects that enhance and protect the Santa Fe water shed from the headwaters to Cochiti Lake.

7-1-I-12 Develop and implement a groundwater protection and management strategy.

7-1-I-13 Limit future installation of new domestic wells in areas that can be reasonably served by the municipal or regional water system.

7-1-I-14 Work cooperatively with the county to protect existing public and private wells from contamination.

Water Conservation

7-1-I-15 Reexamine the city's water conservation policy and consider a policy that encourages more extensive commercial water conservation. Revisit the rate structure and Utility Expansion Charges to consider rates and charges that relate more directly to the actual costs existing and new water customers impose on the water system.

7-1-I-16 Examine alternative methods for reducing water use and estimate the potential for water savings from each method.

This could include examining the feasibility of use of all surface runoff.

7-1-I-17 Determine the most cost effective way of utilizing the treated wastewater effluent, and fund the implementation of the *Treated Effluent Management Plan*.

With the understanding that there are downstream obligations that must be considered, no wastewater effluent should go unused.

7-1-I-18 Impose limitations on uses that consume large amounts of water, such as private swimming pools, fountains, and water-use intensive landscapes such as golf courses.

7-1-I-19 Fund the development, adoption, and subsequent annual updating of a comprehensive Water Resource Management Plan, which would include

elements such as conservation programs, reuse of treated wastewater effluent, aquifer and surface source protection, and water rights acquisition, with updates to the city's General Plan and regional plans as needed.

7-1-I-20 Establish specific indicators that would initiate water resource management plan updates and implementation of plan-required projects.

One such indicator should be the 10-percent production margin. The system would ideally have a 20-percent production margin at all times, but anytime this margin falls to 10 percent, infrastructure improvements would be implemented to restore it to 20 percent.

7-1-I-21 Coordinate the water resource management plan closely with the *Treated Effluent Management Plan* currently under development.

Regional Efforts

7-1-I-22 Work with the county to protect the aquifer shared by both jurisdictions by restricting drilling of new wells and requiring all new development to be hooked to the city's or county's water system.

7-1-I-23 Encourage the county to revise its performance-based subdivision criteria.

These have resulted in sprawl and further depletion of ground-water resources because the cumulative effect of development is not considered during project approval.

7-1-I-24 Promote partnerships and cooperative agreements with the county, neighboring pueblos, and state and federal authorities to participate in the development of a regional water plan to address regional water resource issues.

Extension of Services

7-1-I-25 Establish ordinances to govern the water service boundary.

Water Quality

7-1-I-26 Protect water quality in watercourses.

Adopt a comprehensive ordinance related to stormwater management.

Adopt a comprehensive wellhead protection plan.

Environmental

7-1-I-27 Permanently maintain and enforce comprehensive water-supply protection policies, including watershed, wellhead, and aquifer protection measures.

Acequias

7-1-I-28 Create an acequia restoration plan, including protection, and if appropriate, reintroduction of water flows.

7-1-I-29 Designate acequias as historic districts or landmarks, and enact zoning ordinances to ensure their protection.

This would impede the sale of water rights in acequias to persons who would subdivide the formerly agricultural land and use the water rights. While acequias meet the standards for protection under the Historic Districts Ordinance, they are not officially designated or shown on the zoning maps.

7-1-I-30 Oppose all water rights transfers with the State Engineer that contravene the historic designation of acequias.

7-2 WASTEWATER MANAGEMENT

Capital Improvements, Rehabilitation, and Extension of Service

7-2-I-1 Enhance wastewater treatment capacity at the Wastewater Treatment Plant's present site to meet future growth and regulatory demands.

7-2-I-2 As part of the regional growth management strategy, require annexation to the city as a condition of extending wastewater service to any area outside city limits, as long as this is not prohibited by law, ordinances, or joint powers agreements between the city and the county or preexisting agreements between the city and landowners.

7-2-I-3 Prohibit development that relies on on-site sewage treatment within city limits, where connection to the city system is physically viable.

The use of low pressure sewers should be considered only for sites that could not be connected to the public gravity flow system, because of topography or an interceding arroyo.

7-2-I-4 Maintain the W*astewater Master Plan* as the implementing tool for the General Plan, and ensure that all capital improvements to wastewater collection and treatment systems are in accordance with the W*astewater Master Plan*.

Work toward completing the different phases of such a plan must continue to be funded as must any subsequent updates and revisions of this document. These updates must be made not less than once every five years.

7-2-I-5 Maintain design and construction standards for water and wastewater infrastructure that reflect evolving technology and the city's needs.

Update the standards at least once every five years. The revisions to such standards must be done by a mayor-appointed advisory board consisting of city staff and qualified members of the public.

7-2-I-6 Prioritize rehabilitation of existing sewer lines in need of replacement or reconstruction.

Between $1.5 million and $2 million a year are estimated to be needed for this purpose. In 1996, it was estimated that between 50 and 80 miles of the total 260 miles of sewers needed to be replaced or reconstructed. High on the replacement list are those lines which have been in service for five decades or longer, or are made of concrete or vitrified clay. Because of their condition, these lines are more likely to be intruded and obstructed by roots, or to leak raw sewage into the surrounding soil. Under the present conditions, these

lines may represent a threat to the health and well-being of residents. In order to adequately finance sewer rehabilitation projects in a timely way, the projects should be included in the Wastewater Master Plan *and CIP and financed from enterprise monies.*

7-2-I-7 Develop an impact fee structure (or sewer infrastructure expansion fee for new development).

Contamination, Recharge, and Reuse

7-2-I-8 Prohibit the installation of sewers within 100-year flood plains.

To protect the integrity of existing ephemeral water bodies (arroyos) and their natural beds, the construction of sanitary sewage collector lines should only take place outside of the 100-year flood plain of an arroyo.

Maintenance

7-2-I-9 Incorporate programs and practices to improve the maintenance of the wastewater collection system.

Plans and programs outlined in the existing Wastewater Master Plan *include:*

- *Promote a local grease recycler;*
- *Improve the "root intrusion program" which includes vapor rooting, high-pressure cleaning, and TV verification;*
- *Control renegade inflow into the sewage collection system, particularly from storm water entering through manhole vents; and*
- *Increase maintenance and replacement of large diameter sewer lines.*

7-2-I-10 Establish a program to gradually take over the maintenance of existing private sewers, upon the condition that the owners bring those sewers up to city standards, and establish a fund based on revenue for the purpose. Phase out existing septic systems wherever possible.

Funding

7-2-I-11 Establish impact fee or special assessment districts to fund the construction of large mains.

While the installation of new collector lines should continue to be the responsibility of the land developer, master plan lines, or interceptors, should be the city's responsibility. However, developers must be responsible for fronting the cost of such lines (master plan lines), if their installation is required to be made ahead of schedule for the benefit of a given development project.

7-2-I-12 Ensure that revenues generated by specific programs continue to be used exclusively to support the programs.

An example of this is the Extra Strength Surcharge Program, designed to make the contributor of a special waste (grease) responsible for the

abatement of problems caused by such a waste in the collection and treatment systems.

7-2-I-13 Create special funds to cover costs associated with socially responsible development such as affordable housing, midway housing, homeless shelters, or customer directed waivers such as indigent utility bills.

The existence of such funds would prevent utility rate increases that are primarily linked to the utility's actual cost of providing waivers and exceptions.

7-2-I-14 Establish a method of reimbursement to developers for construction of sewers which serve other properties.

As an example, if a property owner at the end of a street develops ahead of the other lot owners on the street, he is required to extend the sewer main along the street to his property at his expense. When the other lot owners develop, there should be a method in place whereby they reimburse the developer of the sewer for a fair share of his outlay. As an alternative, the city extends sewer mains to individual properties and collects impact fees for the purpose.

7-3 SOLID WASTE AND RECYCLING

Master Planning

7-3-I-1 Prepare a comprehensive master plan to formulate the most coherent and efficient approach to waste management.

The plan should be developed in conjunction with Santa Fe County, which maintains its own collection and transfer system, and the Solid Waste Management Agency which manages the regional landfill. Furthermore, this plan should be revised on a regular basis, not less frequently than once every five years.

7-3-I-2 Incorporate specific projects outlined in the waste master plan in the city's CIP.

Once this plan is developed, implementation of specific projects contemplated in the plan must be funded adequately and executed.

Volume Reduction and Recycling

7-3-I-3 Ensure that solid waste fees include the cost of transferring and transporting the waste, in addition to the cost of waste disposal.

Historically, Santa Fe residents have not borne the true cost of waste disposal. These costs are now manifest in the acquisition, development, and operation of a regional landfill and of a transfer station that have been compliant with state and federal regulation from their inception. This policy will ensure that there will be increasing economic incentive to reduce the quantity of waste that must be collected or transported for disposal.

7-3-I-4 Maintain adequate fees to support operation and capital improvement of the city's transfer station and any other similar facility to be constructed in the future.

This is necessary because the city will have to pay to transport and dispose of the waste at the regional landfill. This would have the added benefit of potentially reducing the amount of waste received from persons residing or doing business outside of the city.

7-3-I-5 Adopt volume-based rates for waste collection.

Such rates are already in place to some extent for commercial users who must pay in proportion to the frequency and size of the refuse bins that are serviced by the city. Extension of these rates to residential users will convey an appropriate, similar waste reduction message.

7-3-I-6 Encourage private and public sector initiatives for waste reduction, and through a program of education, stimulate voluntary efforts, such as backyard composting and waste exchanges, in source reduction, and reuse.

7-3-I-7 Develop recycling programs for building materials, furniture, appliances, etc.

Transfer and Regulation

7-3-I-8 Incorporate both organic and inorganic recycling at transfer stations and future convenience centers.

7-3-I-9 Locate additional transfer facilities, including special purpose facilities such as convenience centers for yard waste, and sites for the reception of household hazardous wastes.

In order to reduce cross-town vehicular traffic, facilities should be located in different places in and around the city. The city should work with the county to undertake one or more joint ventures in the interest of cost efficiency.

7-3-I-10 Establish regulations for transportation of hazardous materials through the city.

Federal laws pre-empt much of the city's regulatory ability in this matter.

7-3-I-11 Ensure that businesses using or generating hazardous materials are regulated by the city.

7-4 STORMWATER MANAGEMENT

Drainage

7-4-I-1 Use the drainage master plan as the vehicle to address system deficiencies, accommodate future growth, and promote recharge and reuse.

Basin-wide recommendations can be adopted as part of the Drainage Master Plan.

7-4-I-2 Incorporate the use of porous materials (e.g., porous asphalt, modular paving, gravel, lattice concrete blocks and porous bricks) for outdoor spaces, paving,

and sidewalks as part of public construction practices and the city's Engineering Standards.

If resources permit, retrofitting of existing areas can also be undertaken.

7-4-I-3 Incorporate stormwater management in the city's development review procedures, and ensure that new development has minimal impact on natural drainage channels, water quality, and flow capacity.

7-4-I-4 Do not permit a net increase in runoff during a 24-hour period on any development site.

This is an existing practice. Because soils in Santa Fe are generally dry, this requirement does not pose undue hardship. The city's Public Works Department should maintain a schedule showing the porosity of different paving materials for objective evaluation of projects.

Alternatives for achieving no net increase in 24-hour runoff could include recycling runoff through landscaping watering systems, and using retention/ detention basins. Portions of parking lots, for example, can be designed to hold water for a few hours before gradually discharging after peaking of flow.

7-4-I-5 Analyze the feasibility of establishing stormwater assessment districts and include incentive programs for decreasing impermeable surfaces on public and private property.

7-4-I-6 Require environmentally sensitive design standards, such as those established in the *Santa Fe River Master Plan,* in the construction of public infrastructure impacting natural drainage systems. Natural arroyo systems should be allowed to continue to function as living absorption areas. Water detention, check dams, gabions and weirs are preferred solutions when stormwater improvements are required.

7-4-I-7 Establish review requirements so that all development projects having an impact on the rate and amount of run-off in the Santa Fe River be analyzed. Promote protection of a natural river character throughout the river's length.

7-4-I-8 Work cooperatively with the county to address and redress the problems with the Santa Fe River in the Agua Fria stretch, from Camino Carlos Rael to the sewage treatment plant.

Flooding

7-4-I-9 Continue to impose storm drainage performance standards established in Section 14-90.4 of the Land Development Laws, and enhance the standards based on innovative solutions.

7-4-I-10 As part of preparation of a plan for Downtown, incorporate stormwater management practices.

7-4-I-11 Incorporate procedures in the city's Subdivision Regulations to retire subdivisions located within the 100-year flood zone.

7-5 UTILITIES

7-5-I-1 In collaboration with utility and other providers, establish a program to place underground all new and replacement utilities for electric, telephone, cable, etc., including both main and service lines where feasible. The City of Santa Fe will identify sources to pay for the placement of new and existing overhead lines underground.

7-5-I-2 Work with utility providers to present a "*Facility Plan*" for adoption after adoption of the General Plan.

7-5-I-3 Amend the Land Development Code to implement and enforce the adopted facility plan including policies based on the definition of "prudent avoidance."

7-5-I-4 Monitor research on the health effects of electric and magnetic fields, and establish standards for siting high voltage lines.

7-5-I-5 Protect solar rights and access from encroachment of adjacent development wherever practicable.

7-5-I-6 Sponsor programs to encourage the appropriate development of solar energy in any application.

7-5-I-7 Encourage the utility companies to conserve resources and find innovative solutions to demand and environmental problems before investing in costly new facilities.

7-5-I-8 Fund educational programs on the conservation of energy, with strategies for buildings and the community as a whole including microclimate analysis, passive solar, natural ventilation, day lighting, shading, and "green" building materials.

7-5-I-9 Ensure that new development is as energy efficient as possible and consider tax incentives to promote solar and energy conservation.

7-5-I-10 Work with utility providers to establish protected corridors—preferred pathways to provide electrical and other needed utilities for current and future needs.

7.6 IMPACT FEES

Program Development

7-6-I-1 Work with Santa Fe County to prepare coordinated land use assumptions that meet the policy objectives of the Extraterritorial Zone and county general plans as well as the requirements of the Development Fees Act.

A single set of land use assumptions will accommodate annexations and a shifting Extraterritorial Zone, and will also enable the city to finance and construct capital facilities, such as roads, which are burdened by growth outside of the Urban Area and Extraterritorial Zone.

These assumptions should reflect specific city and county policies for where growth should occur, rather than current population and employment trends.

7-6-I-2 Identify additional capital facilities for which the city will assess impact fees.

Drainage, fire, police, and emergency services could be fully or partially funded by impact fees in areas in which new development has created a burden on existing facilities.

7-6-I-3 Restructure the city's Park Dedication Program to meet the requirements of the Development Fees Act and the policies.

The current Parks Dedication Ordinance and provisions for cash in lieu of dedication is not based on land use assumptions or a CIP for parks.

7-6-I-4 Prepare a CIP which meets the requirements of the Development Fees Act for each category of capital improvement for which it will assess impact fees. These plans may become "elements" of the city's existing CIP or may be separate documents. Reflect the land use assumptions and policies set forth in this Plan and implementing ordinances and the land use assumptions prepared pursuant to the Development Fees Act in the CIP for each category of capital improvements.

It would be preferable for the city's CIP to be a single document with "elements" that meet the requirements for CIPs under the Development Fees Act. All information concerning financing of public facilities would then be in the same document. Other New Mexico communities which have adopted impact fees since the effective date of the Development Fees Act have separate CIPs for each category of facilities for which fees are assessed.

7-6-I-5 Utilize impact fees to upgrade the recently acquired Sangre de Cristo Water System and to acquire additional water rights.

The CIP for water supply should include a nexus between the need to upgrade and acquire water and growth projected in the Urban Area, the Extraterritorial Zone, and the county in the land use assumptions. While the Development Fees Act does not specifically authorize impact fees for purchasing water rights, a case can be made that water rights are a component of a water supply system.

7-6-I-6 Design service areas for impact fees for specific categories of capital improvements, such as water, wastewater, neighborhood parks, pocket parks, and open space pockets to encourage infill, with higher fees assessed in service areas which are not already served by these and facilities and lower fees assessed in service areas which have improvements in place.

Impact fees may be utilized as incentives to encourage new development to occur in areas in which capital improvements are already in place. The service area for facilities such as community parks and community open space arterial roads should be citywide and even regional.

City/County Coordination

7-6-I-7 Coordinate the city/county planning for regional water supply, wastewater, solid waste management, arterial roads, drainage, regional parks and regional open space, and bicycle and pedestrian trails. Consider the appropriateness of regionalizing fire, police, and emergency medical services in the future.

A regional planning effort for capital facilities could build upon the present planning process taking place in both the city and county, and could result in a more rational, cost efficient utilization of impact fees and other capital financing strategies. CIPs for capital facilities would be based on appropriate service areas, rather than political boundaries.

7-6-I-8 Enter into a joint powers agreement with the county to enable the city to assess and collect impact fees in the Extraterritorial Zone for upgrading the Buckman well field, diversion of water from the Rio Grande, upgrading the Buckman water supply line, and acquiring water rights, improvements which will benefit both the city and county water systems.

A joint city-county CIP should indicate as a service area the entire area served by these specific facilities.

The CIP for water supply should attribute the need for upgrades to these facilities to new growth in the city and Extraterritorial Zone which they serve. The city and county should seek an amendment to the Development Fees Act which would enable the city and county, by joint powers agreement, to agree on a procedure for city facilities, such as arterial roads, which are burdened by growth in the county even beyond the Extraterritorial Zone.

7-6-I-9 Ensure that the joint powers agreement with the county would enable the city to assess impact fees for arterial roads in the city and Extraterritorial Zone which are impacted by growth in the Extraterritorial Zone.

7-6-I-10 Ensure that the joint powers agreement with the county would replace the use of development agreements for extension of city wastewater facilities into the Extraterritorial Zone, would comply with the Development Fees Act, and would enable the city to assess impact fees in the Extraterritorial Zone for wastewater facilities.

The development agreements currently used for extension of wastewater facilities into the Extraterritorial Zone do not comply with the Development Fees Act. The CIP for wastewater should identify a service area which includes all areas of the Extraterritorial Zone which will be served by the city system during the planning horizon.

Waiver of Impact Fees

7-6-I-11 Waive all or part of impact fees that would otherwise be assessed on housing which meets the affordability criteria of the Development Fees Act.

The city shall identify other sources of funding for capital facilities to serve affordable housing units. Impact fees collected from market rate housing shall not be used to replace the waived fees.

7-6-I-12 Waive all or part of impact fees that would otherwise be assessed on new businesses which fulfill the city's economic development strategy.

Community services and development of the General Plan and the city's economic development strategy identify the types of businesses which would create appropriate employment opportunities in the city and region. Impact fee waivers for such businesses, perhaps in combination with other incentives

such as industrial revenue bonds or deferred taxes, would make Santa Fe more competitive with other communities in attracting these businesses.

7-6-I-13 Waive fees altogether or assess lower fees in identified "infill" areas which are already served with adequate capital facilities in order to attract development to these areas.

Impact fees may be utilized to implement a growth management strategy which encourages new development in areas which is already served with adequate public facilities. CIPs for capital facilities should provide an adequate rational basis for waiving fees in served areas.